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# CALIFORNIA FISH AND WILDLIFE 2000
# A PLAN FOR THE FUTURE

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DECEMBER, 1989

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VOLUME 1

# CALIFORNIA FISH & WILDLIFE 2000

## *A Plan for the Future*

## *I. INTRODUCTION*

The fish and wildlife 1) program in California has experienced a significant evolution over the past decade. Pressures from a rapidly growing population presented tremendous challenges to the human resources of California's Federal and State agencies to resolve conflicts between development activities and fish and wildlife resources. Urbanization and agricultural development of private lands made public lands even more important to maintaining California's justly famous biological diversity. Innovative approaches to conservation were clearly required to avoid severe reductions in fish and wildlife resources and even the extinction of some of the State's many rare plants and animals.

The Bureau of Land Management (BLM) in California has been strongly committed to the conservation and management of the fish and wildlife resources on the public lands. This commitment has been demonstrated by the inclusion of significant fish and wildlife related goals and objectives in all land use plans developed over the past decade. It is further illustrated by the fact that California has designated 64 wildlife or botanical Areas of Critical Environmental Concern to serve as natural areas and has developed 107 Habitat Management Plans to guide the management of important fish and wildlife species.

Cooperation with other State and Federal agencies and public interest groups has been a critical component in resolving many conflicts and ensuring the long-term conservation of important fish and wildlife resources. For example, urban development in the Palm Springs area threatened to extirpate the Coachella Valley fringe-toed lizard. Cooperation between BLM, the U.S. Fish and Wildlife Service, the California Department of Fish and Game, The Nature Conservancy, and local government resulted in acquisition of the best habitat for the lizard and the establishment of a major preserve that will ensure the viability of the species and function as a natural area to conserve the biological diversity of the area.

Similar joint commitment created the Desert Tortoise Natural Area, and a large effort is currently underway in western Kern and eastern San Luis Obispo Counties, where the Carrizo Plain Natural Area has been established to conserve the rapidly disappearing natural habitats of the southern San Joaquin Valley. These special habitats, unique in their own right, also support several endangered species of animals and plants. Almost 54,000 acres of formerly private lands have been acquired by BLM to date, with 80,000 more acres to be acquired in the near future.

Over the past decade Bureau funding through the normal appropriations process was insufficient to carry out the programs necessary to manage fish and wildlife habitat in California. The aggressive pursuit of alternative funding sources and the use of challenge cost shares helped to offset this funding imbalance.

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1) Throughout this report the term "fish and wildlife" will be used in the broad sense to include: fish and their habitats; wildlife and their habitats; threatened, endangered, and sensitive plants and animals; and special habitats, which are defined as rare, vulnerable and representative habitats, plant communities, and ecosystems.

More than $2,500,000 in challenge cost share contribution helped BLM manage its fish and wildlife resources over the past decade.

Significant strides have been made in the last ten years toward conserving and enhancing our fish and wildlife resources in California. These accomplishments, however, as effective as they have been, have necessarily been reactionary: we have been able to address only the most pressing issues that have resulted from the growing demands on these resources. To be truly effective our management must be more pro-active. We must, through foresight and planning, take measures necessary to prevent conflicts from arising in the first place - or at least reduce the severity of those conflicts that are inevitable.

The California Desert Plan, finalized in 1980, was the Bureau's first truly integrated plan. Interested publics representing all major uses and concerns were involved in every step of the planning process. The result was a balanced, multiple-use blueprint that would guide the management of the California Desert's many significant resources. The Desert Plan continues to be one of the most dynamic planning approaches in the Bureau.

Implementation of the actions prescribed by the Desert Plan, however, has not kept pace with the needs of the region. Population increases greater than those envisioned by the Desert Plan have occurred in the Los Angeles Basin. It is now projected that more than 20 million people will reside there by the year 2000. Pressures exerted by this populace on the resources of the California Desert will likely increase to levels that are almost unfathomable at this time.

To respond to the growing demands on the public land resources in California, the Bureau will have to change many of its traditional management practices. A good example of this is forestland management.

The rapid population growth of rural areas has resulted in the public looking more and more to the Bureau's forestlands for recreation, aesthetic, and fish and wildlife values. We can therefore no longer manage these lands only for sawlogs. Management must include consideration of all of the forest's resources, with an eye toward maintaining biological diversity. Much higher levels of expertise - in new silviculture techniques, plant and animal ecology, and public outreach - will be required to effect this new management.

The change to increasingly active management will not be easy. It will require strong commitments from Bureau managers and professionals to the goal of conserving and enhancing California's fish and wildlife habitats and in identifying and setting aside natural areas. It will also require an even greater involvement by the public in every level of planning and implementation. Outside funding sources must also increase.

All of this will require significant increases in the Bureau's budget and personnel in California. This document describes these funding and personnel needs. Although the costs may appear great, the benefits to California's fish and wildlife resources will be greater. An investment now in our fish and wildlife resources will result in incalculable profits for future generations. ❑

# II. EXECUTIVE SUMMARY

In 1988, the Bureau of Land Management published Fish and Wildlife 2000 *A Plan for the Future*. This document was prepared as a strategic plan to bring a sharper focus to the Bureau's Fish and Wildlife Program, to outline the direction of the program between now and the year 2000, and to achieve an increased understanding of the Bureau's approach to the management of fish and wildlife resources. The national Fish and Wildlife 2000 has provided guidance which would help to ensure that available funding would be channelled, on a priority basis, into actions and projects which were considered most urgent by the Bureau, and which will encourage cooperation in the solution of problems and resource conflicts. This guidance was based on the need to continue and expand present management levels along with these identified priorities.

The purpose of this document, California Fish and Wildlife 2000 - Volume 1, is to emphasize not only the magnitude and significance of the ongoing program in California, but also the tremendous potential which exists in California for the management of fish and wildlife habitat resources. California Fish and Wildlife 2000 - Volume 1 defines goals and objectives through the year 2000 for the management of habitat for the more than 800 species of fish, wildlife, and special status plants which occur on 17.2 million acres of public lands in California and 1.5 million acres of public lands in northwestern Nevada, including a special focus on additional budget and personnel needs over and above current levels. Pressures from a rapidly growing population will continue to create tremendous challenges for the management of fish and wildlife resources within a multiple-use context. The ever-accelerating rate of urbanization and agricultural development of private lands in California will continue to make public lands even more important to the maintenance of California's fish and wildlife resources. A second document, California Fish and Wildlife 2000 - Volume 2, which will be produced in the near future, will showcase examples of fish and wildlife habitat practices in California by discussing individual management areas and efforts, and will provide an additional forum by which cooperative management will be continued and expanded.

California Fish and Wildlife 2000 - Volume 1 is organized into six major components, which are summarized below. Summaries of workmonth and financial needs to implement the proposed program through the year 2000 are presented in Appendices A (Financial Needs) and B (Personnel Needs). A review of the primary laws, regulations, and other guidance under which the Fish and Wildlife Program operates is presented in Appendix C.

1. External Coordination. Fish and wildlife habitat management is a three step process of fact-finding, planning and coordination, and implementation. Issues in this component include the need to develop coordinated approaches wherever possible, and the need for increased Bureau personnel and funding to take better advantage of the significant challenge cost share and contributed funding opportunities uniquely available in California. There is the potential over the next 10 years to at least double the current level of $12,500,000 in challenge cost share opportunities (including funding, labor, and land acquisition) if the Bureau is able to provide its share of funding and labor. The primary objective of this component is to increase effective coordination with and significant contributions from involved agencies, conservation organizations, user groups, and individual members of the public. The overall need for managing the coordination and fund transfer process through the year 2000 is $1,654,000 in additional funding (primarily in workmonth costs for two additional positions); needs for project development are included in the following five components.

2. Wildlife Habitat Management Program. As the quantity and quality of wildlife habitat are impacted, the rich array of habitats on public lands in California becomes increasingly important to the maintenance of the State's wildlife heritage. Pressures on habitat are unusually great because California's population is growing at ten times the national average. Issues include the need for additional inventory and monitoring, the ever-increasing level of pressure on public land resources, the need to maintain and enhance fish and wildlife habitat on public lands, and the fact that budget and personnel have not kept pace with program needs. The basic purpose of the Wildlife Habitat Management component is to administer the public lands in California to provide habitat for wildlife through inputs into resource management plans and subsequent implementation of these management decisions, coordination of on-the-ground land use decisions, development of cooperative management plans, and implementation of habitat management projects. The total need to carry out an effective wildlife habitat management program through the year 2000 in California is additional funding of $67,600,000, including 15 additional positions.

3. Riparian Area Management. Riparian area management is a crucial component of the

Bureau's Fish and Wildlife Program in California. Healthy riparian areas provide highly productive fish and wildlife habitat and significant biological diversity, as well as high quality water, aesthetic values, recreational opportunities, and forage. Many public land riparian areas in California are in less than satisfactory condition due to the fact that current budget and personnel needs are not adequate to meet program needs. The primary objective of riparian area management is to develop and implement effective riparian management strategies, including public involvement at all stages of the process. It is essential that areas in less than satisfactory condition be improved. The total program need through the year 2000 is an additional $18,800,000, including 11 additional positions.

4. Fisheries Habitat Management. The streams, rivers, lakes, springs, and reservoirs on public lands in California provide spawning, rearing, and other key habitat for cold and warm water fish. Management issues include insufficient productivity and carrying capacity, less than adequate participation in joint ventures, the effects of offstream water development, and the need to protect instream flows. The most important objective for fisheries habitat management in California is to increase habitat and productivity in aquatic systems currently underutilized by fish. The total program need for fisheries habitat management through the year 2000 is an additional $27,300,000, including three additional fisheries positions.

5. Threatened and Endangered Species Program. Bureau lands in California - which provide habitat for 34 Federally-listed, up to 345 Federal candidate, 6 Federally-proposed, 72 State-listed, and 22 BLM Sensitive species - are subject to a variety of complex management issues. Pressure to both listed and candidate species habitat will increase significantly over the next decade, making public lands increasingly critical to the survival and recovery of threatened and endangered species. Budget and personnel are inadequate to meet even current program needs. It is imperative that the Bureau in California increase its efforts to recover these species. The primary objective for the threatened and endangered species program in California is to obtain additional information critical to the conservation and recovery of species and habitats of special management concern, and to use this information to prepare and implement effective management strategies. The overall need for threatened and endangered species in California through the year 2000 is an additional $140,700,000, including 28 additional positions.

6. Outreach Programs. Outreach programs are essential to maintaining and increasing public awareness and support of the Bureau's Fish and Wildlife Program in California. Issues include the need to effectively convey information about biological values present on public lands, the need for an increased on-the-ground Bureau presence, and the need for continuation of effective enforcement of laws and regulations designed to protect fish and wildlife values. The most important objective of the fish and wildlife outreach program in California is to develop public understanding of and support for the Bureau's management program. The total need for fish and wildlife outreach in California through the year 2000 is an additional $1,750,000, including nine additional positions.

Two critical cross-component elements of the Fish and Wildlife Program in California are inventory and monitoring, and habitat acquisition. Overall, within all components, there is a total need for inventory and monitoring of $30,500,000, and for habitat acquisition of $210,700,000. An overall increase of 370% in the number of fisheries, wildlife, and botanical positions will be needed to effectively manage the program into the year 2000.

There is a tremendous potential for management and enhancement of fish, wildlife, and special status plant habitats in California. This is especially true for agencies such as the Bureau of Land Management, which manages public lands within a multiple-use context. Much can be gained through effective coordination with other management programs as well as cooperation with other agencies and private entities. Of the 761 individuals permanently employed by the Bureau in California, over 25% typically perform functions which assist the Fish and Wildlife Program through participation in land acquisitions and exchanges, environmental analysis, engineering, contract administration, project maintenance, procurement, document preparation, development of effective mitigation and compensation strategies, enforcement of laws and regulations designed to benefit fish and wildlife, public outreach, and an ongoing on-the-ground field presence.

Finally, the sheer scope of the Bureau's Fish and Wildlife Program in California means that program activities may affect activities occurring in other states. Bighorn sheep habitat concerns, wild horse and burro management, decisions concerning management of spotted owl habitat, and desert tortoise research and habitat management strategies are only a few of the program elements which will necessitate close coordination with other involved states such as Arizona, Nevada, Oregon, and Utah. ❑

# III. SIGNIFICANCE OF WILDLIFE RESOURCES ON PUBLIC LANDS IN CALIFORNIA

## A. Overall Fish and Wildlife Program

The significance of BLM fish and wildlife resources in California cannot be over-estimated. Given California's human population of over 28 million, there is a considerable potential for impacts on fish and wildlife, and a great need for conservation of fish and wildlife habitat. BLM manages a significant amount of wildlife habitat in California, totaling over 17 million acres of public lands. These lands contain an abundance and diversity of fish and wildlife habitats ranging from ocean shores to alpine tundra. BLM's stewardship encompasses all but three of California's 58 counties, and also includes an additional 1.5 million acres in northwestern Nevada (see Figure 1). This vast area is managed by 15 Resource Areas under the direction of four District Offices.

The California Habitat Relationship Interagency Task Group has divided the state into 48 major habitats (Airola 1988). The BLM has consolidated these habitats into those listed in Table 1, which reflects the acreage and management status of California BLM wildlife habitats by broad geographic characteristics and by species groups occupying them.

California is the most diverse state in the union with respect to the numbers of species and habitats present within its boundaries. About 8000 different plants occur in the State, and there are more kinds of plants in California than the total occurring in the central and northeastern United States and Canada, a region 10 times larger. About 375 different plant communities have been described in California, and this number is probably no more than 10 percent of the true total. These communities provide habitat for over 800 species of mammals, birds, reptiles, fish, and amphibians.

Diversity on the public lands in California mirrors that of the State as a whole. A very large number of the State's plants and most of the State's animals occur on public lands.

Fish and wildlife on the public lands produce both primary and secondary benefits. The primary benefits are to the hunters, fishermen, photographers, viewers, and other consumptive and non-consumptive users who combine efforts, skill, their own equipment, and occasionally the services of a guide and

Table 1
California BLM Wildlife Habitat

| Type of Habitat and Units | Total Area | Public Land Habitat (Acres/Miles) | | | |
|---|---|---|---|---|---|
| | | Under Management | | In Need of Management | |
| | | of HMP | of Other | of HMP | of Other |
| Terrestrial Uplands (acres) | 17,654,126 | 5,519,403 | 3,055,558 | 5,302,994 | 686,572 |
| Wetlands | | | | | |
| a) Riparian | 87,517 | 5,020 | 4,559 | 19,571 | 40,290 |
| b) Marshes, meadows, seeps, and other wetlands | 139,370 | 99,165 | 12,420 | 17,225 | 10,280 |
| Aquatic | | | | | |
| a) Streams,perennial (mi) | 1539 | 116 | 175 | 191 | 108 |
| b) Streams, intermittent(mi) | 3,551 | 260 | 144 | 301 | 2 |
| c) Lakes and ponds (sa's) | 41,000 | 15 | 17 | 36,968 | 4000 |
| d) Reservoirs(sa's) | 9,141 | 5025 | 27 | 4089 | 0 |
| Habitat use by animal group | | | | | |
| a) Big Game (acres) | 7,264,036 | 5,086.193 | 1,054,569 | 715,241 | 400,033 |
| b) Small Game/Upland game (acres) | 14,370,500 | 1,159,000 | 581,620 | 2,974,120 | 1,031,500 |
| c) Waterfowl/migratory birds (acres) | 129,257 | 98,181 | 12,722 | 7,944 | 2,330 |
| d) Fish spawning and rearing (acres/miles) | 489/5090 | 62/2,305 | 56/214 | 100/471 | 6/2,100 |
| e) Fishable streams (miles) | 735 | 92 | 91 | 233 | 0 |
| f ) Other/ Estuary | 100 | 100 | 0 | 0 | 0 |

# United States Department of the Interior Bureau of Land Management

## California BLM Jurisdictions

### BLM-CALIFORNIA PUBLIC LAND ACREAGES

(surface acres, by county)

CALIFORNIA

| County | Acres | County | Acres |
|---|---|---|---|
| ALAMEDA | 217 | SAN DIEGO | 176,542 |
| ALPINE | 12,848 | SAN FRANCISCO | 0 |
| AMADOR | 9,197 | SAN JOAQUIN | 436 |
| BUTTE | 18,916 | SAN LUIS OBISPO | 182,975 |
| CALAVERAS | 38,055 | SAN MATEO | 0 |
| COLUSA | 31,559 | SANTA BARBARA | 7,701 |
| CONTRA COSTA | 69 | SANTA CLARA | 5,730 |
| DEL NORTE | 195 | SANTA CRUZ | 12 |
| EL DORADO | 14,673 | SHASTA | 115,449 |
| FRESNO | 128,369 | SIERRA | 5,336 |
| GLENN | 11,173 | SISKIYOU | 99,262 |
| HUMBOLDT | 62,863 | SOLANO | 2,157 |
| IMPERIAL | 1,188,839 | SONOMA | 7,281 |
| INYO | 2,889,746 | STANISLAUS | 3,626 |
| KERN | 717,919 | SUTTER | 2 |
| KINGS | 10,403 | TEHAMA | 49,470 |
| LAKE | 126,739 | TRINITY | 67,328 |
| LASSEN | 1,009,323 | TULARE | 118,774 |
| LOS ANGELES | 13,732 | TUOLUMNE | 44,942 |
| MADERA | 3,216 | VENTURA | 1,929 |
| MARIN | 0 | YOLO | 28,111 |
| MARIPOSA | 71,959 | YUBA | 1,868 |
| MENDOCINO | 117,052 | | |
| MERCED | 5,865 | CALIFORNIA TOTAL | 17,204,689 |
| MODOC | 273,581 | | |
| MONO | 554,215 | NEVADA-<br>Acreage managed by BLM-California | |
| MONTEREY | 63,885 | | |
| NAPA | 32,703 | | |
| NEVADA | 19,011 | HUMBOLDT | 18,706 |
| ORANGE | 1 | WASHOE | 1,433,475 |
| PLACER | 20,693 | | |
| PLUMAS | 10,486 | NEVADA TOTAL | 1,452,181 |
| RIVERSIDE | 1,640,397 | | |
| SACRAMENTO | 267 | | |
| SAN BENITO | 113,024 | BLM-CALIFORNIA | |
| SAN BERNARDINO | 7,074,568 | TOTAL | **18,656,870** |

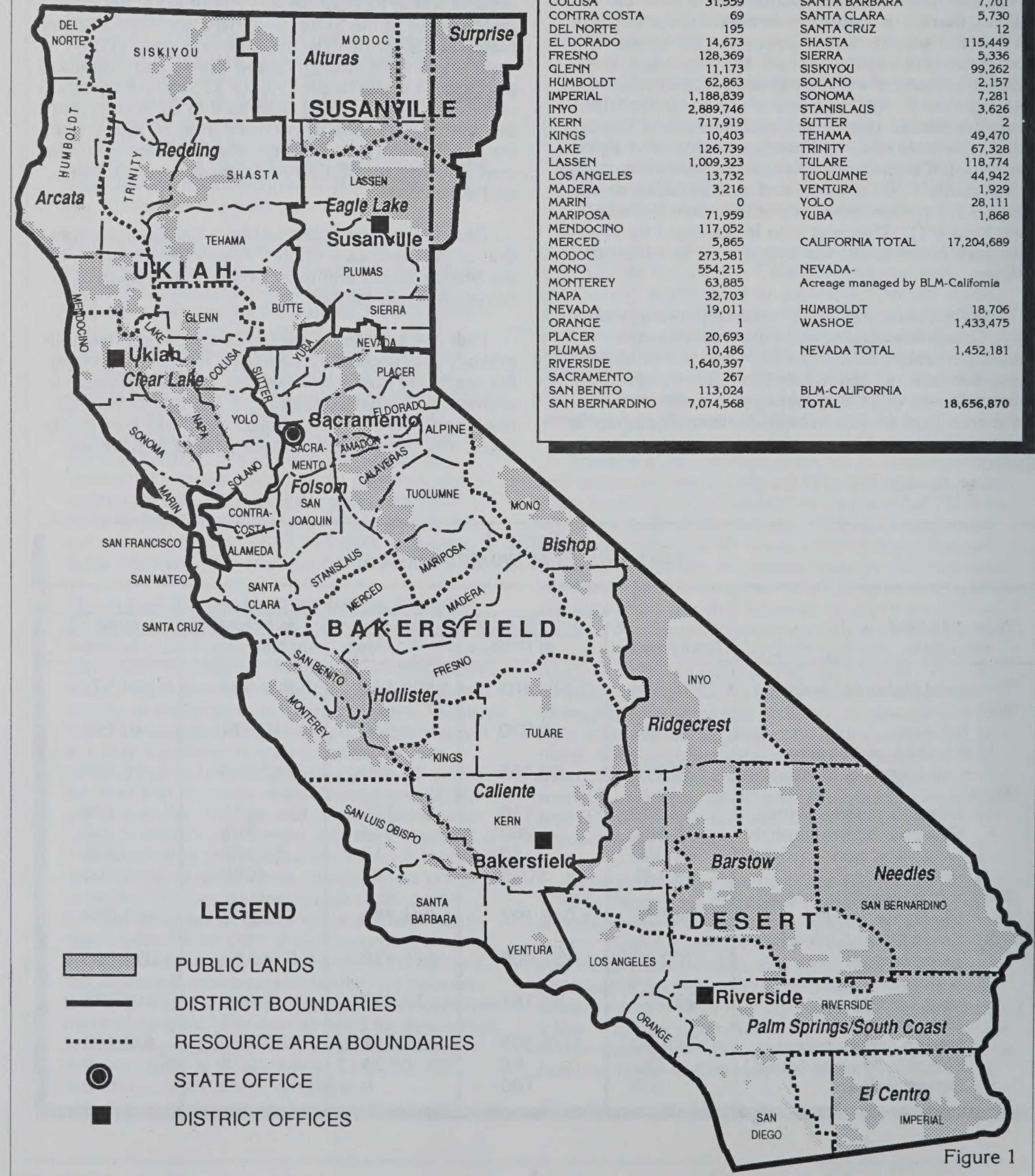

DEL NORTE
SISKIYOU
MODOC
Alturas
Surprise
SUSANVILLE
HUMBOLDT
TRINITY
Redding
SHASTA
Arcata
LASSEN
Eagle Lake
Susanville
TEHAMA
UKIAH
PLUMAS
MENDOCINO
GLENN
BUTTE
SIERRA
LAKE
Ukiah
Clear Lake
COLUSA
SUTTER
YUBA
NEVADA
PLACER
YOLO
ELDORADO
Sacramento
ALPINE
SONOMA
NAPA
SACRAMENTO
AMADOR
SOLANO
CALAVERAS
MARIN
Folsom
TUOLUMNE
MONO
CONTRA-COSTA
SAN JOAQUIN
SAN FRANCISCO
ALAMEDA
Bishop
STANISLAUS
MARIPOSA
SAN MATEO
SANTA CLARA
MERCED
MADERA
SANTA CRUZ
BAKERSFIELD
SAN BENITO
FRESNO
Hollister
INYO
MONTEREY
TULARE
Ridgecrest
KINGS
Caliente
SAN LUIS OBISPO
KERN
Bakersfield
Barstow
Needles
SAN BERNARDINO
SANTA BARBARA
DESERT
VENTURA
LOS ANGELES
Riverside
RIVERSIDE
ORANGE
Palm Springs/South Coast
El Centro
SAN DIEGO
IMPERIAL
LEGEND
▨ PUBLIC LANDS
DISTRICT BOUNDARIES
RESOURCE AREA BOUNDARIES
◎ STATE OFFICE
■ DISTRICT OFFICES

Figure 1

outfitter to produce valuable recreation experiences. The secondary benefits from fish and wildlife accrue to the communities whose businesses sell equipment, transportation, food and lodging to the recreationists who visit the communities.

It is roughly estimated that hunters annually use California public lands for nearly 1,000,000 days of hunting worth $30,000,000 in primary benefits. Over 750,000 days of fishing, worth $10,000,000, take place on the public lands. Observing wildlife is undoubtedly important to campers, hikers, and motorized travelers who spend 75,000,000 hours on BLM lands and waters each year. Conservatively, BLM estimates California wildlife viewing is worth $70,000,000 in primary benefits.

Another important value of fish and wildlife is the maintainance of its ecological niche. All creatures play a role in the biological diversity of an area. The Bureau has a greater diversity on its land than any other agency in California and in the nation.

## *B. Special Status Species*

Of special concern are those species that have been designated as threatened or endangered by the U.S. Fish and Wildlife Service as well as those species which are declining but which may not have been formally designated. Threatened and endangered species occupy at least one-quarter of the 17.2 million acres in California and 1.5 million acres in Nevads managed by California BLM.

California public lands support 26 Federally-listed threatened or endangered animals and eight threatened or endangered plants. A number of State-listed, Federal candidate, Federal improposed, and BLM Sensitive species also occur on the public lands in California (see Table 2).

Table 2
Threatened, Endangered and Other Special Status Plants and Animals on BLM Land in California (1989)

| Species Group | Federal T/E | Federal Candidate | Federal Proposed | State T/E | BLM Sensitive |
|---|---|---|---|---|---|
| Mammals | 5 | 17 | - | 10 | 1 |
| Birds | 7 | 7 | 1 | 12 | 1 |
| Fish | 9 | 8 | - | 7 | 2 |
| Amphibians | 1 | 8 | - | 3 | 1 |
| Reptiles | 3 | 9 | - | 3 | 4 |
| Invertebrates | 1 | 10 | - | - | 2 |
| Plants | 8 | Known 135<br>suspected 151 | 5 | 37 | 11 |
| Total | 34 | 345 | 6 | 72 | 22 |

## C. *Volunteerism and Outside Contributions*

For many years, BLM in California has been extremely successful in attracting outside sources of contributed and matching funding, especially for important wildlife projects. We have also expanded our in-house use of volunteers for wildlife work.

California, unlike other public land states, has a large and diverse human population that exerts strong pressures on wildlife habitat. California also has many strong wildlife advocate groups that contribute energy, enthusiasm, and funds to the management of fish and wildlife habitat. Letters from individuals and groups, received in support of the California Fish and Wildlife 2000 effort, are presented in Appendix D. California BLM has tapped into this human resource and has used a significant amount of volunteer help to accomplish wildlife projects over the last several years (see Table 3).

As we continue to pursue the "challenge cost share" concept (matching non-Federal resources or funds with BLM funding), our primary need is to take advantage of currently available outside funding by being much more aggressive with Bureau matching funds.

Over the past several years, we have taken advantage of over $2,500,000 worth of contributed funds, labor, and materials from a wide spectrum of agencies, groups, and organizations (see Tables 3 and 4). These contributions have resulted in significant on-the-ground accomplishments benefiting wildlife and habitat on BLM lands in California.

A significant part of the contributed funding that California BLM receives for wildlife habitat improvements comes from the California Department of Fish

### Table 3
### Volunteer Services Donated to California BLM Wildlife Program

| Year | # Volunteer Hours Service | Value of Work donated | BLM Cost to Manage Program |
|---|---|---|---|
| 1987 | 17,772 | $174,244 | $8,158 |
| 1988 | 23,564 | 218,637 | 11,890 |
| 1989 | 23,321 | 219,739 | 9,318 |
| Total | 64,657 | $619,620 | $29,366 |

### Table 4
### Monetary or Material Contribution to California BLM's Wildlife Habitat Mangement Program From Primary Outside Sources 1987-1989

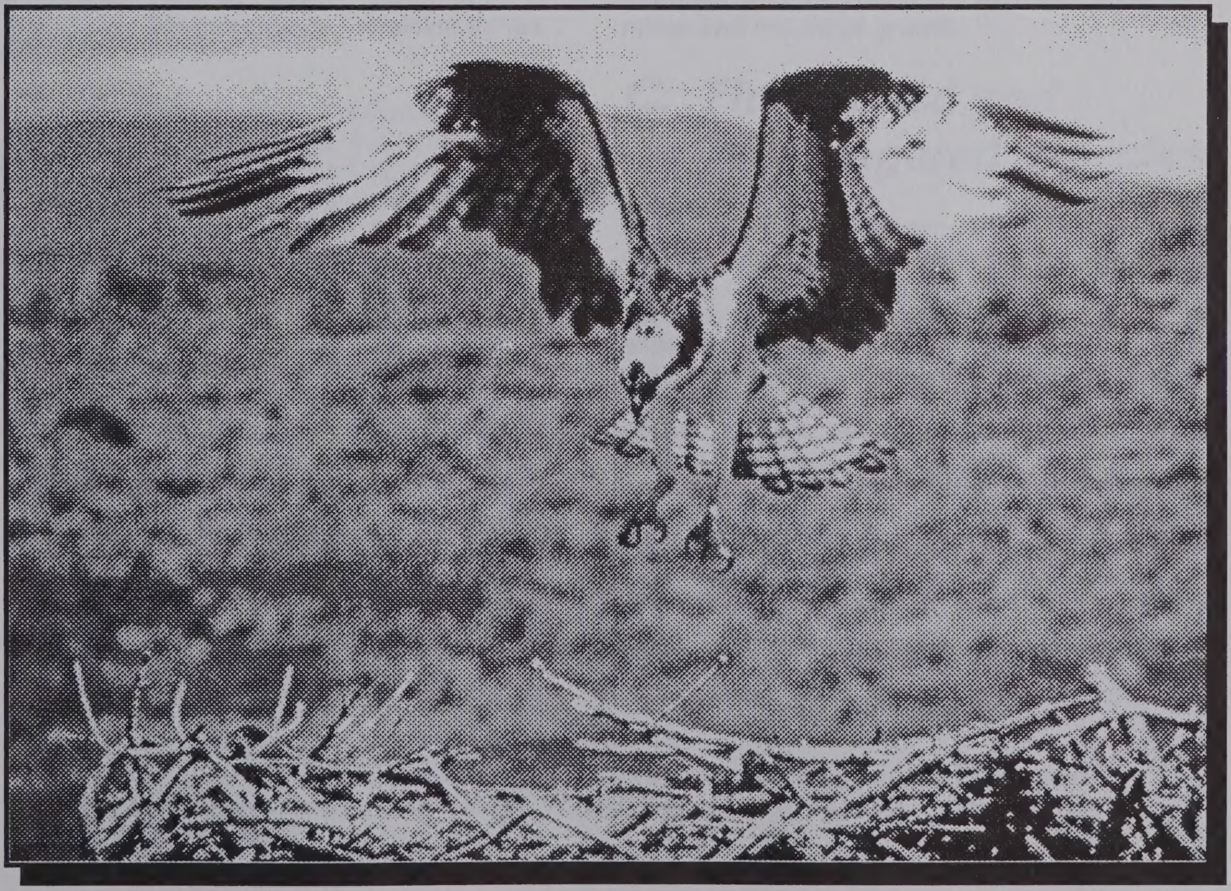
| Year | Contributor | $ Value |
|---|---|---|
| 1987 | CDFG | 157,100 |
| | Counties | 9,700 |
| | Other Groups | 154,800 |
| 1988 | CDFG | 207,685 |
| | Other Groups | 202,800 |
| 1989 | CDFG | 186,600 |
| | Other Groups | 407,500 |

and Game (CDFG). CDFG and BLM have prepared a joint program of work covering wildlife habitat and range improvement projects on lands administered by BLM. Much of the CDFG funding is derived from the sale of personalized automobile license plates (CELP funds). For cooperatively funded projects the CDFG is required by law to provide funding only to cover direct expenditures related to habitat improvement projects. CELP legislation, for example, requires that these funds be used for paying actual and necessary direct costs of accomplishing the project for which the funds were advanced. CELP funding does not provide for such items as planning, studies, inventories, engineering design, writing of environmental assessments, operation, maintenance and monitoring of the projects. These aspects of the project must be provided by BLM. Projects have included peregrine falcon reintroduction, pond reconstruction, prescribed burning, bald eagle nest protection, water development, improvement of marsh habitat, riparian revegetation, dam construction, etc. Other types of funding from CDFG are discussed under "Coordination with the California Department of Fish and Game."

The Nature Conservancy has played a key role through their Stewardship program in cooperatively managing many areas such as the Carrizo Plain Natural Area, Big Morongo, and the Coachella Valley Fringe-toed Lizard Preserve. With the recent passage of the California Wildlife, Coastal and Parkland Act of 1988 (Proposition 70), an additional $81.3 million is now available to the California Wildlife Conservation Board and CDFG for wildlife habitat acquisitions. Some of this money is earmarked for specific projects related to BLM programs.

The Off-Highway Motor Vehicle Division of the California Department of Parks and Recreation has also provided significant funding for inventory and monitoring related to the development of OHV recreation. Funding has also been contributed to environmental education projects developed by the Bureau, and to habitat rehabilitation.

Private industry is also involved. For example, the Sacramento Metropolitan Utility District (SMUD) and the California Energy Commission have contributed over $200,000 for a study of wintering bald eagles in the Cache Creek area. The electric power industry has also contributed nearly $50,000 for the development by BLM of computerized information systems dealing with raptors and endangered species. Industry has also contributed more than a million dollars for wildlife management as part of Endangered Species Act compliance.



# IV. WILDLIFE 2000: OUTLOOK FOR THE FUTURE OF WILDLIFE ON BLM LANDS IN CALIFORNIA[1]

Over the last century, California has experienced more rapid population and economic growth than any other developed area in the world. Yet, California retains extensive acreages of wild or relatively undeveloped land. Today, 85,000,000 of the State's 101,000,000 acres are considered to be non-urban, non-agricultural lands. Of those, approximately 17, 000,000 acres are administered by the Bureau of Land Management in California, which also manages 1,500,000 acres in northwestern Nevada.

By the year 2000, California's escalating human population and economic growth will make unprecedented demands on the State's undeveloped lands. This section considers the growth trends of the future and their impacts on fish and wildlife and their habitats on BLM lands.

## A. Population Growth

For more than a century, California has experienced a dramatic population explosion. While the population of the United States experienced a 6.5-fold increase between 1860 and 1984, California's population increased 66 fold. Today, California is the nation's most populous state and a world leader in economic, social, and technologic change. Over the next 15-20 years, California's population growth is expected to increase at nearly twice the national rate. From its present level of 28 million, California's human population will increase to 33 million by the year 2000.

Since the turn of the century, California's population has been largely urban-based, and rural growth was extremely slow. However, the 1970s witnessed a dramatic change in rural rates of growth. From 1980 to 1987, 23 rural California counties experienced population increases averaging nearly 24 percent. This trend in rural growth is expected to continue into the next century.

Urban and rural growth trends will have an increased, powerful influence on resource management policies. Demands for urban and industrial growth will increasingly result in pressure over resource uses and tradeoffs in resource management. Such pressures will be most crucial at the urban-rural interface, where much of California's growth is now occurring.

## B. Fish and Wildlife

In general, fish and wildlife will assume greater importance as urban growth encroaches on the public lands, as the demand for consumptive and nonconsumptive uses of fish and wildlife resources increases with the human population, and as other fish and wildlife habitats across the state are reduced. However, as fish and wildlife assume greater importance on the public lands, so will demands for competing uses. Demand for timber, fuelwood, forage, minerals, and recreation will increase along with urban and industrial growth.

## C. Threatened and Endangered Species

The number of threatened and endangered species on public lands will increase as the existing backlog of candidate species (see Table 2) is processed by the U.S. Fish and Wildlife Service, and additional species pressure is realized from human population growth. Increased efforts to manage and protect these species and their habitats will be necessary, and public support for such programs will intensify. In some cases, the public lands will function as last reservoirs for remnant populations of endangered species. The difficulties of maintaining viable populations of such species within suitable habitat will increase, as will the complexities of managing for biological diversity.

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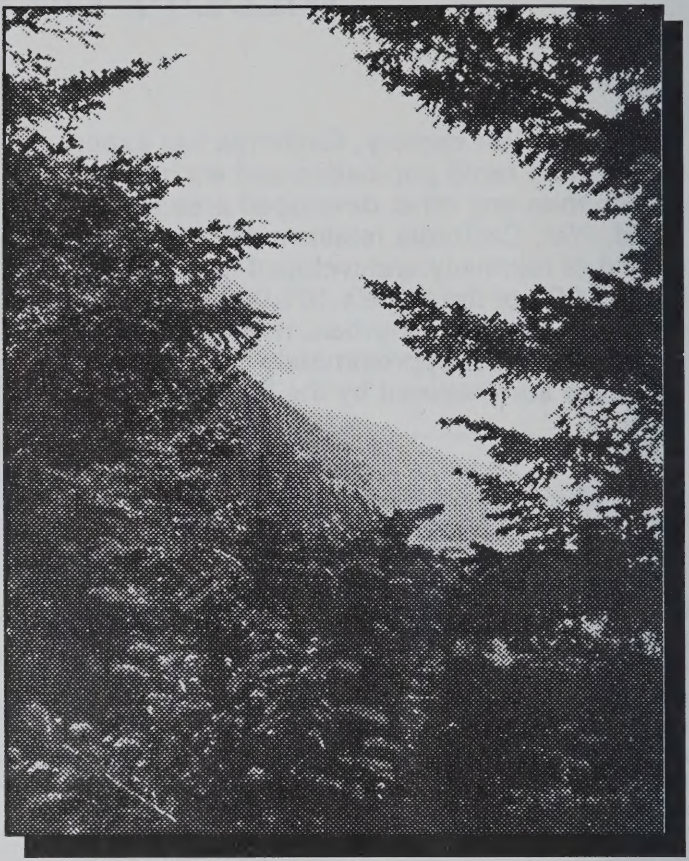
1) The primary source of information for this section was:
Forest and Rangeland Resources Assessment Program. 1988. California Forests and Rangelands: Growing Conflict Over Changing Uses. California Department of Forestry and Fire Protedtion. Sacramento, California. 436 pp.

## D. Timber Management



Consumption of lumber and wood products in California has been increasing steadily since 1950. California is currently the largest single housing market in the nation. Demand for lumber is expected to continue its upward trend as the State's human population increases; however, the rate of growth in demand will eventually decrease reflecting the aging of the baby boom generation and the slower growth in the number of households.

Private lands traditionally have been a major source of wood products in California, accounting for 90 percent of total yield during the 1950s. Currently, private harvesting accounts for only 59 percent of the total yield. The remaining 41 percent is harvested on Federal lands, primarily on lands administered by the U.S. Forest Service.

Historically, the Bureau has not been one of the primary contributor of wood products in California. At present, less than 1 percent of the State's total yield comes from BLM lands. That level of production is expected to decrease in the future as Bureau lands continue to be enveloped by urban growth and the demand for nonconsumptive uses of the public lands increases. This will be especially true in the foothills of the Sierra Nevada where growth rates currently are twice that of the State of California as a whole. As the change in public demand increases (on the forests in California BLM), so will the need for more intensive management as well as technological development.

## E. Water

Water is California's most important and controversial resource. Approximately 70 percent of California's water supply is derived from runoff in the northern third of the state. Yet, 80 percent of water use occurs in the southern two-thirds of the state. Californians consume more than 30 billion gallons of water daily, about one-quarter of national daily consumption.

Rights to the use of water in California are extremely complex. Many counties where water runoff originates are concerned about the availability of future water supplies to meet the needs of growing populations. Water rights in such counties often belong to companies serving major urban centers. These "county of origin" issues are of particular importance in the Sierra Nevada foothills where growth has been most rapid but will be similar, if not more intense, throughout the State by the year 2000.

With respect to wildlife and fisheries maintenance, increasing demand will result in greater competition for the water presently allocated for that use. On the public lands, demand for water will assume more importance as the process of urbanization of rural areas continues. Dam development and water storage issues on public lands could also increase along with the associated fish and wildlife issues.

## F. Agriculture

The projection of general agricultural trends in California is difficult. Agriculture may increase or decline depending on a variety of factors, including international commodities markets, technological advances, and the cost of water. Population growth may stimulate an increase in agricultural production or simply result in fewer exports of agricultural products. An increase in agricultural production would be limited by the acreage of suitable land open to such development. At this time, much of the arable land in California is already in agricultural production.

Trends in forage use in California are somewhat easier to predict. Rising costs for livestock production and decreasing demand for beef will tend to decrease the demand for forage on private lands. Instead, a trend to diversify the use of private rangelands will develop, and the demand for living space will increase resulting in greater conversion of rangelands to urban areas.

On public lands the situation with respect to forage use is expected to be somewhat different than on private lands. On public lands AUMs for cattle and sheep will remain fairly constant or decline only slightly. The traditional problems associated with allocating forage for livestock as well as wildlife will intensify as wildlife habitats elsewhere are reduced and fragmented. As habitat loss on private lands progresses, many of the remaining islands and reservoirs of habitat will occur on the public lands. As a result, competition between livestock and wildlife for forage will increase.

## G. Contaminants

During the last four decades, environmental contamination and the effects of contaminants on wildlife have increased dramatically. Effects range from direct mortality or deformation of individuals to subtle behavioral or physiological effects which ultimately are magnified at the population level.

Fortunately, the trend towards increased development and use of hazardous chemicals in the environment is slowing, and public awareness of the threat of environmental pollution is increasing. Research into the effects of environmental contaminants on fish and wildlife and the mitigation of those effects is increasing.

## H. Energy and Minerals

Urban and industrial growth in California will result in increasing demands for energy and mineral production. Future mineral development on public land will be subject to increasing mitigation and compensation requirements as development of minerals on private lands - and associated pressure on habitats - increases the value of public lands to fish and wildlife populations.

## I. Recreation and Wilderness

California is projected to experience the most rapid increases in demand for outdoor recreation of any region in the country well into the next century. Demand for developed recreation sites such as picnic areas, campgrounds, and cabins in scenic areas will increase as the average age of the population increases. As young urban professionals begin raising families, demand for recreational opportunities closer to home will also increase. Future demand for recreation is expected to be especially strong in the California Desert where much of the Bureau's land base lies. This area lies just east of the Los Angeles basin, the most heavily populated area in California.

While the demand for outdoor recreation is increasing, meeting this demand is becoming increasingly difficult. More and more people are crowding into existing recreation areas because the development of such areas is not keeping pace with demand. Many state and national parks now require reservations for camping and limit the length of stay. Yet, increasing austerity programs in Federal and State budgets and decreasing staffs are forcing more and more reliance on volunteers for campground and trail maintenance. Although private lands represent a potentially significant source of outdoor recreation opportunities, problems associated with access and liability will hinder development of recreatioanal facilities. Meanwhile, Federal lands will be forced to absorb the demand until such developments occur.

Increasing demand for recreation on the public lands will have a variety of impacts on wildlife. On the positive side, the demand for nonconsumptive uses of wildlife will increase. This will result in an increase in demand for fish and wildlife and habitat protection. Also, the demand for recreational opportunities in wilderness settings will increase. On the negative side, the increase in recreational facilities and public use will result in important habitat losses and increased human use of the remaining habitats.

## J. New Technology

New technologies and more sophisticated approaches to fish and wildlife management are developing and in the future will play important roles in the Bureau's programs in California. Computer technology, in particular, is advancing rapidly and is increasing in importance. For example, computerized data bases and modeling programs are being developed to store and manipulate large amounts of information about wildlife populations and their habitats. These include the California Department of Fish and Game's Natural Diversity Data Base (NDDB) and Wildlife Habitat Relationships (WHR) system. The NDDB is a statwide storage and retrieval system for occurrence records of rare, threatened, and endangered species. The WHR program contains detailed habitat information about all the State's wildlife species. Both of these data bases are powerful tools for planning wildlife programs and conducting wildlife impact assessements. The Bureau is also developing a number of computerized data bases which will play increasingly important roles in the planning process for wildlife. These include the Wildlife and Fisheries Information System and Geographic Information System.

In addition to new computer techologies, new biological disciplines are being developed which are changing the overall aproach to managing wildlife and their habitats. The science of conservation biology and the concept of guild management, both of which arose during the 1980's, are important advances. Conservation biology is a specialized branch of biology established to address the global extinction crisis and the problem of conserving natural diversity within increasingly fragmented and reduced ecosystems. Guild management is a management system in which assemblages of species occupying particular components of an ecosystem are addressed, as opposed to single-species management which has characterized many of the past approaches to wildlife management. Both of these advances will make important contributions to the management of wildlife in California in the near future.

## K. Land Tenure Adjustments

Land tenure adjustments will play a key role in the Bureau's fish and wildlife program in California as rural growth accelerates. Rural growth has increased demands for municipal facilities, transportation and communications systems, land subdivisions, and other community needs, and will continue to do so. In many areas this growth is enveloping adjacent public lands. Consequently, the interest in and value of those lands is increasing.

The intent of a more active land tenure adjustments program for fish and wildlife in the future should be to dispose of Bureau-administered lands which because of their size, location, or character have become unsuitable for management and through exchange of those lands to acquire critical unprotected habitat in areas where management of fish and wildlife values can be better administered. In the future, the consolidation of important habitat through acquisition or exchange could become one of the Bureau's most enduring contributions to fish and wildlife conservation in California.

## L. General Wildlife Program Concerns

Increasing demands on the Bureau's fish and wildlife habitat management program will require a variety of general program and policy responses. Most important, funding and staffing levels will need to increase to keep pace with increasing program demands. With respect to staffing, in recent years the Bureau in California has employed a full-time, permanent biological staff of 25-30 individuals, including an average of 20 professional wildlife biologists, 1 fisheries biologist, 2-3 botanists, and 4-5 specialized staff members such as research biologists. To keep pace with an expanding fish and wildlife program, biological staffs will need to increase and the number of fisheries biologists, botanists, and specialized staff members will need to increase in proportion to overall resource management demands.

Inventories, projects, and research needs will likely exceed staffing levels in the years to come. As a result, the fish and wildlife program will become more dependent on outside funding sources. This in turn will require a greater effort by the Bureau to solicit fish and wildlife program funds from State resource agencies, private conservation groups, other public and private organizations, and even the public at large. Funding from outside sources might come in the form of direct contributions, challenge cost shares, shared cost agreements, or donations. In addition, the use of volunteers and other outside sources of labor for project work will need to increase. In the future, wildlife initiatives will need to become more cooperative in nature, more innovative, and will require greater public involvement. ❑

# V. PROGRAM FOR THE FUTURE

The goals and objectives of the Bureau's Fish and Wildlife Program for the future in California, California Fish and Wildlife 2000, are organized into six major components:

A. External Coordination
B. Wildlife Habitat Management
C. Riparian Area Management
D. Fisheries Habitat Management
E. Threatened and Endangered Species Program
F. Outreach Programs.

These components define the program by manageable categories and provide a definite focus for program direction via the existing channels of the Bureau Manuals and budget processes.

Discussions of management needs for these six components through the year 2000 comprise the body of the present document. More diversified components, such as Coordination, Wildlife Habitat Management, and T&E Species, are further divided into more specific discussions of individual aspects of the component (for example, specific discussion of Big Game Habitat Management within the Wildlife Habitat Management component). Where specific management emphasis exists within each aspect (for example, the management of habitat for individual species such as tule elk within Big Game Habitat Management), a discussion is also presented for management of the individual species' habitat. In addition, a summary of projected future personnel needs for management of the California Fish and Wildlife Program through the year 2000 is presented in Appendix B of this document. Figure 2 provides a visual presentation of the relationship between program components.

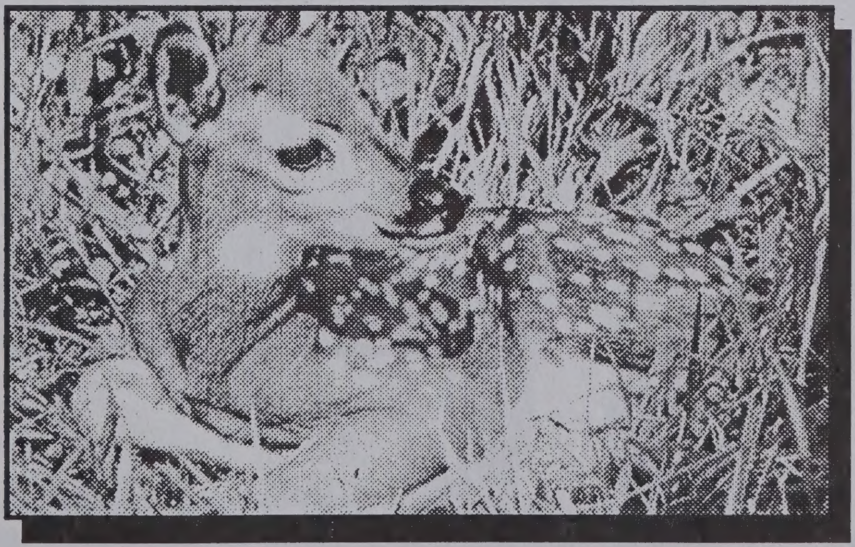
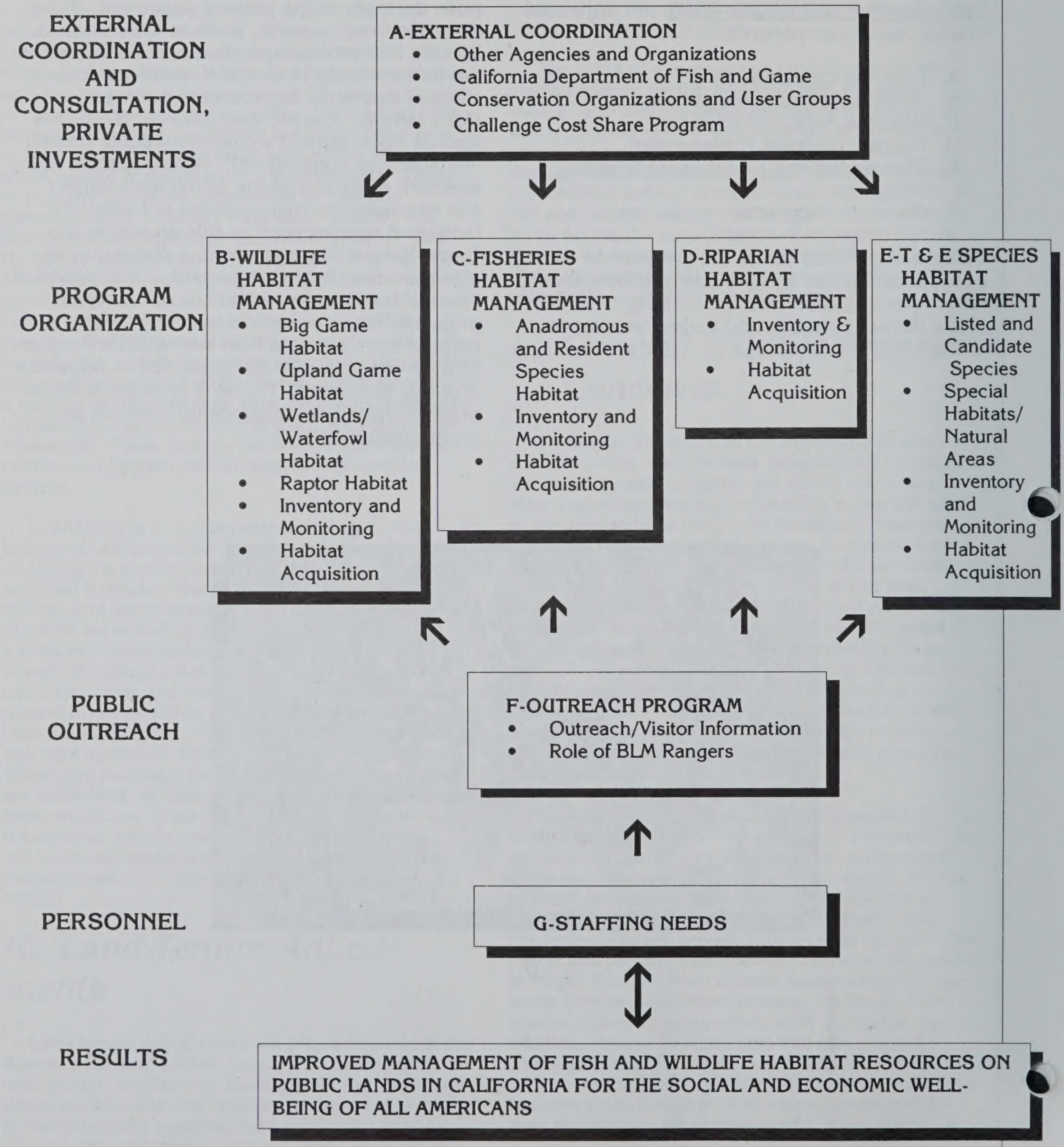


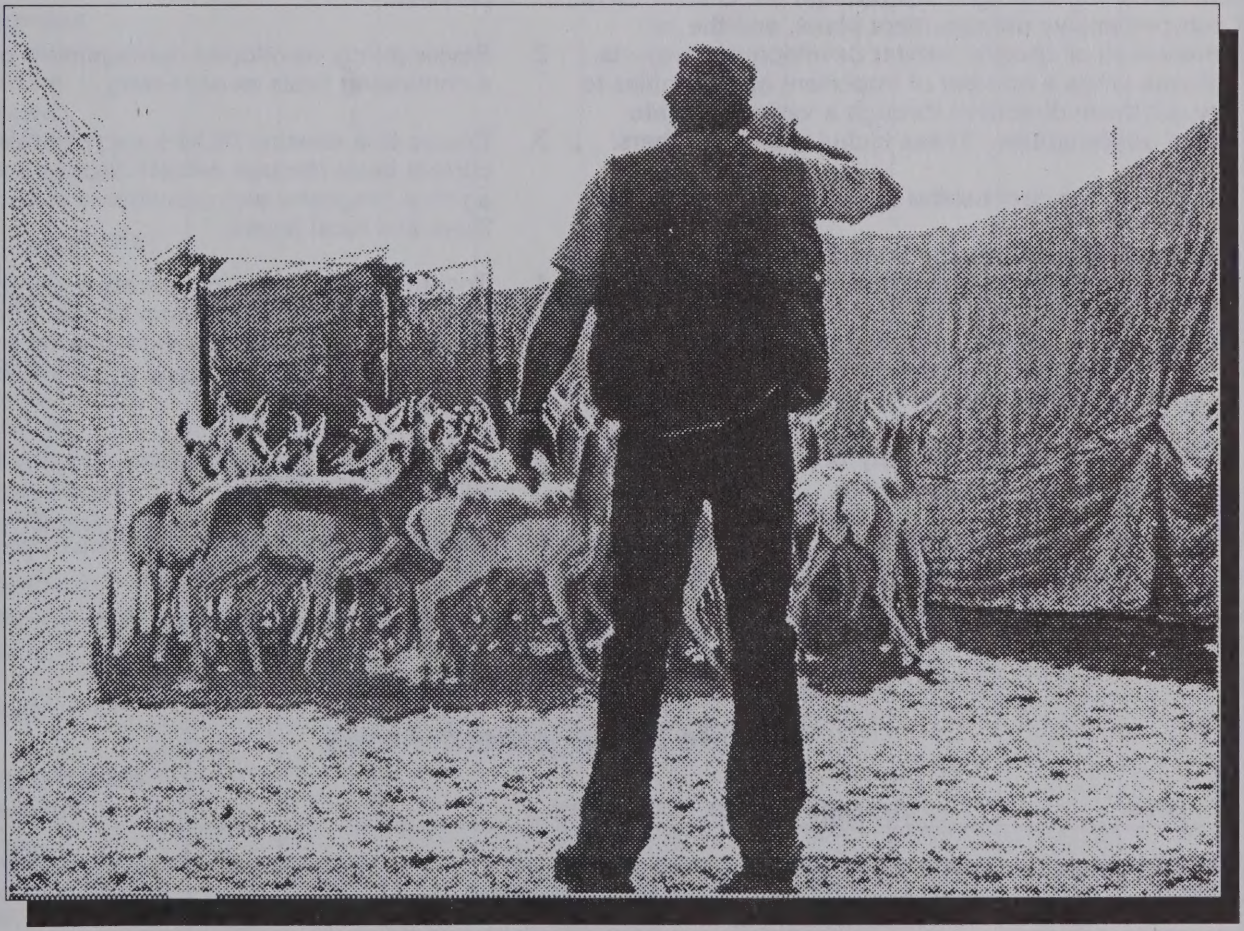
Figure 2. BLM Fish and Wildlife Program in California


EXTERNAL COORDINATION AND CONSULTATION, PRIVATE INVESTMENTS
A-EXTERNAL COORDINATION
• Other Agencies and Organizations
• California Department of Fish and Game
• Conservation Organizations and User Groups
• Challenge Cost Share Program
PROGRAM ORGANIZATION
B-WILDLIFE HABITAT MANAGEMENT
• Big Game Habitat
• Upland Game Habitat
• Wetlands/ Waterfowl Habitat
• Raptor Habitat
• Inventory and Monitoring
• Habitat Acquisition
C-FISHERIES HABITAT MANAGEMENT
• Anadromous and Resident Species Habitat
• Inventory and Monitoring
• Habitat Acquisition
D-RIPARIAN HABITAT MANAGEMENT
• Inventory & Monitoring
• Habitat Acquisition
E-T & E SPECIES HABITAT MANAGEMENT
• Listed and Candidate Species
• Special Habitats/ Natural Areas
• Inventory and Monitoring
• Habitat Acquisition
PUBLIC OUTREACH
F-OUTREACH PROGRAM
• Outreach/Visitor Information
• Role of BLM Rangers
PERSONNEL
G-STAFFING NEEDS
RESULTS
IMPROVED MANAGEMENT OF FISH AND WILDLIFE HABITAT RESOURCES ON PUBLIC LANDS IN CALIFORNIA FOR THE SOCIAL AND ECONOMIC WELL-BEING OF ALL AMERICANS

## A. External Coordination

Fish and wildlife habitat management, as practiced by the Bureau of Land Management in California, is a three step process of fact-finding, planning, and implementation. None of these steps can be effective without consultation and coordination with involved entities. BLM must obtain input from the California Department of Fish and Game, other agencies and organizations, and conservation organizations and user groups in order to maximize the effectiveness of its management efforts. In addition, effective participation in the Challenge Cost Share program helps to maximize the Bureau's ability to properly manage the fish and wildlife resources occurring on public lands in California.

The following individual discussions outline the role of each of these aspects of the Fish and Wildlife Program in California with regard to external coordination, and includes needs to carry out effective coordination through the year 2000.



# 1. COORDINATION WITH THE CALIFORNIA DEPARTMENT OF FISH AND GAME

## Issues

1. It is increasingly important for BLM and CDFG to work cooperatively to achieve the objectives of both agencies.

2. A significant amount of assistance in terms of funding and labor is available to BLM from the State, Bureau staff numbers and budget have not kept pace with the need for BLM to provide project design, environmental documentation, and project supervision.

## Background

Bureau Manuals 6521 and 6525 direct Bureau fish and wildlife managers to maximize cooperation with State fish and game agencies through the development of comprehensive management plans, and the implementation of specific habitat development projects. California offers a number of important opportunities to carry out these directives through a variety of State funding opportunities. These include, among others:

- Hill Bill (for deer habitat improvement and survey)
- Environmental License Plate Fund (CELP) (for non-game habitat improvement on Federal lands)
- Proposition 19 (for acquisition and restoration of coastal and inland wetlands, rare or endangered species habitat, and the restoration of waterways)
- Proposition 70 (for a variety of purposes, including acquisition, fisheries, etc.)

In addition, BLM, in cooperation with CDFG, manages 14 National Cooperative Land and Wildlife Management Areas within the State, totalling 822,000 acres. These areas, which by Executive Order are exempt from the non-mineral public land laws are listed below in Table 5 . These areas were designated to guarantee public access to areas containing recognized wildlife values, and to improve the wildlife habitat resources therein.

Joint preparation of management plans greatly increases BLM's ability to obtain contributions from CDFG.

## Objectives

1. Continue to develop management plans jointly with the State under the authority of the Sikes Act as prescribed through the MFP/RMP process.

2. Revise jointly developed management plans on a continuing basis as necessary.

3. Ensure that existing MOU's are maintained on a current basis through annual discussions of agency programs and procedures at both the State and local levels.

4. Encourage continued cooperative planning, funding, and implementation of habitat improvement projects on public lands in order to maximize achievement of mutual goals and benefits for dollars spent.

5. Develop joint venture projects annually for submission to CDFG.

6. Increase staffing levels to maximize opportunities for joint venture projects.

### Table 5
### National Cooperative Land and Wildlife Management Areas

| Area | Acreage (acres) | Counties | Date Designation Published |
|---|---|---|---|
| Biscar Reservoir | 4,965 | Lassen | 5/12/62 |
| Caliente | 58,868 | San Luis Obispo | 4/13/61 |
| Cinder Cone | 27,944 | Shasta | 8/17/61 |
| Clear Lake | 112,088 | Colusa, Lake, Yolo, Napa, Glenn | 6/13/62 |
| Jacumba | 6,400 | San Diego | 6/13/62 |
| McCain Valley | 38,692 | San Diego | 8/17/61 |
| Monache-Walker Pass | 306,442 | Tulare, Kern, Inyo | 1/26/62 |
| Mount Dome | 22,276 | Siskiyou | 8/17/61 |
| New Idria | 62,779 | Fresno, San Benito, Monterey | 8/17/61 |
| Otay | 28,492 | San Diego | 6/13/62 |
| Panoche | 50,248 | Fresno, San Benito | 8/17/61 |
| Picacho River | 40,254 | Imperial | 11/20/62 |
| Temblor | 57,751 | Kern, San Luis Obispo | 8/17/61 |
| Yolla Bolly | 4,620 | Tehama | 5/12/62 |

# Financial Planning Sheet

COORD W/CDFG

| Objective #: A.1.-all Workload Measures | FISCAL YEARS 1990-1991 UNITS | COST ($000) | 1992-1993 UNITS | COST ($000) | 1994-1995 UNITS | COST ($000) | 1996-2000 UNITS | COST ($000) | TOTAL UNITS | COST ($000) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. Inventory: 000s Acres | | | | | | | | | | |
| 2. Monitoring: # Plans | | | | | | | | | | |
| 3. Project Develop: # Projects | | | | | | | | | | |
| 4. Reintroductions: # by Species | | | | | | | | | | |
| 5. Plans to be Developed: # HMPs, ACECs, CMAs, CRMPs | | | | | | | | | | |
| 6. Coop. Agreements/ MOUs: # Needed: | 40 | 189 | 50 | 240 | 60 | 315 | 120 | 714 | 270 | 1458 |
| 7. Maintenance: # projects maintained | | | | | | | | | | |
| 8. Recovery Plans: # to be Developed | | | | | | | | | | |
| 9. Acquisition and Exchange: # Projects | | | | | | | | | | |
| 10. Research | | | | | | | | | | |
| Total Cost for Objective | | 189 | | 240 | | 315 | | 714 | | 1458 |
| Staffing/Skills Required: (# and type of positions; workmonth cost has been incorporated in workload measure estimates) | | | | | | | | | | |

# 2. OTHER AGENCY/ORGANIZATION COORDINATION

## Issue

1. There is an ever-increasing need for BLM to build on opportunities for cooperation with other Federal and State agencies to improve wildlife management and conservation.

## Background

BLM in California in the last 30 years has done an excellent job in coordination and in working with other State and Federal agencies in on-the-ground management of fish and wildlife issues and in gaining support for new wildlife habitat acquisitions. Continued emphasis must be placed on the joint development and sharing of research, technical information and monitoring studies with other interested groups, especially the U.S. Fish and Wildlife Service, USFS Experiment Stations and State Universities. Professional studies should be published and workshops and seminars conducted to share new information and the results of historical management practices.

Fish and wildlife habitat management on public lands will assume a greater importance in the future as increases in the population place other demands on public land uses and as habitats are lost due to the rapid urban expansion on many wildlands in California.

## Objectives

1. Continue to enhance cooperation between BLM and other Federal and State resource management agencies who conduct resource inventories and administer programs which involve or effect fish and wildlife habitat.

2. Explore and implement projects where silvicultural forest management practices can be used to benefit wildlife habitat.

3. Conduct tours, workshops and seminars for both BLM and other agency resource specialists, including researchers and educators, to demonstrate BLM's professional efforts in fish and wildlife habitat management and to encourage more interagency cooperation and development of joint habitat management projects.

4. Involve other resource management agencies in developing and publishing joint feature articles reflecting fish and wildlife projects and recovery success stories.

## Financial Planning Sheet

**OTHER AGENCY/ ORGANIZATION COORD.**

| Objective #: A.2.-all Workload Measures | FISCAL YEARS 1990-1991 UNITS | COST ($000) | 1992-1993 UNITS | COST ($000) | 1994-1995 UNITS | COST ($000) | 1996-2000 UNITS | COST ($000) | TOTAL UNITS | COST ($000) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. Inventory: 000s Acres | | | | | | | | | | |
| 2. Monitoring: # Plans | | | | | | | | | | |
| 3. Project Develop: # Projects | | | | | | | | | | |
| 4. Reintroductions: # by Species | | | | | | | | | | |
| 5. Plans to be Developed: # HMPs, ACECs, CMAs, CRMPs | | | | | | | | | | |
| 6. Coop. Agreements/ MOUs: # Needed: | 2 | 4 | 2 | 4 | 2 | 4 | 8 | 32 | 14 | 44 |
| 7. Maintenance: # projects maintained | | | | | | | | | | |
| 8. Recovery Plans: # to be Developed | | | | | | | | | | |
| 9. Acquisition and Exchange: # Projects | | | | | | | | | | |
| 10. Research | | | | | | | | | | |
| Total Cost for Objective | | 4 | | 4 | | 4 | | 32 | | 44 |
| Staffing/Skills Required: (# and type of positions; workmonth cost has been incorporated in workload measure estimates) | | | | | | | | | | |

## 3. COORDINATION WITH CONSERVATION ORGANIZATIONS AND USER GROUPS

### Issues

1. There is limited involvement during the initial stages of the planning process of conservation organizations and user groups, which are often asked for funding or expertise after a project or initiative is approved.
2. Coordinated approaches involving a multitude of organizations are not developed in all cases where opportunities exist.

### Background

BLM as a multiple use agency has the opportunity to obtain the assistance of many different special interest groups. In California, BLM has worked in cooperative ventures with at least 30 different groups. These organizations have provided information and technical assistance to BLM in their respective areas of expertise. They have assisted in locating, inventorying, and evaluating ACECs and other BLM lands with high natural resource values. They have also provided management and monitoring recommendations, reviewed HMPs, and assisted in monitoring the condition of special areas. Many groups work cooperatively with BLM in land acquisition and exchange. Other groups provide labor, materials, and funds, and conduct research. Technical review teams are formed in anticipation of major BLM projects such as an off-road vehicle use areas. These teams consist of representatives from affected State and Federal agencies and concerned special interest groups, such as the California Off-Road Vehicle Association, American Motorcycle Association, and Cal 4 WD representing OHV users, and the National Audubon Society, representing wildlife interests. The involvement of these teams is important in the decision making and planning process for controversial projects. By consulting representatives from all the concerned groups a more balanced approach is achieved. BLM benefits greatly from cooperation with user groups and conservation organizations.

Soda Springs
HOME OF THE DESERT STUDIES CENTER
AN AREA OF CRITICAL ENVIRONMENTAL CONCERN
TOURS

### Objectives

1. Develop 20 cooperative agreements with State and Federal agencies, user groups and conservation groups by 1993.
2. Involve conservation organizations and user groups in the initial planning processes for projects, research and Habitat Management Plans.
3. Establish a statewide conservation council to assist in fish and wildlife management on public lands.

## Financial Planning Sheet

**COORD. W/CONSERV. ORGANIZATION AND OTHER GROUPS**

| Objective #: A.3.-all<br>Workload Measures | FISCAL YEARS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1990-1991 | | 1992-1993 | | 1994-1995 | | 1996-2000 | | TOTAL | |
| | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) |
| 1. Inventory: 000s Acres | | | | | | | | | | |
| 2. Monitoring: # Plans | | | | | | | | | | |
| 3. Project Develop: # Projects | | | | | | | | | | |
| 4. Reintroductions: # by Species | | | | | | | | | | |
| 5. Plans to be Developed: # HMPs, ACECs, CMAs, CRMPs | | | | | | | | | | |
| 6. Coop. Agreements/ MOUs: # Needed: | 3 | 8 | 3 | 8 | 3 | 8 | 6 | 16 | 15 | 40 |
| 7. Maintenance: # projects maintained | | | | | | | | | | |
| 8. Recovery Plans: # to be Developed | | | | | | | | | | |
| 9. Acquisition and Exchange: # Projects | | | | | | | | | | |
| 10. Research | | | | | | | | | | |
| Total Cost for Objective | | 8 | | 8 | | 8 | | 16 | | 40 |
| Staffing/Skills Required: (# and type of positions; workmonth cost has been incorporated in workload measure estimates) | | | | | | | | | | |

# 4. CHALLENGE COST SHARE

## Issues

1. There is a need to maintain incentives for the Bureau to pursue outside partnerships through the Challenge Cost Share portion of the wildlife appropriations.

2. There is limited opportunity for BLM to become more aggressive in wildlife program implementation by securing additional contributed funds, volunteer labor, cooperative project work, etc., because of limited challenge cost share appropriations.

## Background

The Bureau in California is doing an excellent job of utilizing contributions as a means of supplementing wildlife program budgets. In order to encourage BLM to continue these efforts, Congress initiated the challenge cost share program in 1985. During the first year of the program, $295,000 was earmarked to be matched by non-Federal funds and restricted to bighorn sheep management. By 1989, the challenge cost share program had grown to $1.5 million and could be used in all aspects of the wildlife program. California's portion of the challenge cost share appropriation has ranged from $72,000 in 1985 to $239,000 in 1989. By 1989, BLM in California had a total of over $2,500,000 in outside contribrtions to meet the Bureau's challenge cost shares. With increased fixed and administrative costs, enhancement of programs through the challenge cost share approach is becoming increasingly important to implementation of the Bureau wildlife program in California.

California has been very active in generating outside support for the wildlife program. A Fish and Wildlife Habitat Acquisition book was developed in 1986. The book, which was a compilation of potential habitat acquisitions identified in various plans throughout the state, was distributed to organizations having the potential to assist the Bureau in meeting its habitat acquisition objectives. As of 1989, nearly 100,000 acres have been acquired as a result of the book often with assistance from such groups as The Nature Conservancy, Trust for Public Lands, and the Wildlife Conservation Board.

BLM in California also receives $200,000 - $500,000 annually in contributions from the Department of Fish and Game, County fines and others. An average of 22,000 hours of volunteer time is also invested in California's wildlife program annually. These cooperative efforts allow both the Bureau and the contributor to leverage available funds or resources and accomplish work which would not be feasible on their own.

## Objectives

1. Raise the awareness, both internally and externally, of the Bureau's challenge cost share program through publication of contributor source lists and gifts catalogues, effective publicity for successful cooperative efforts, public acknowledgement of contributions, etc.

2. Ensure consistency of challenge cost share efforts with BLM management plans and objectives by involving potential contributors early in the planning process.

3. Increase the incentives for pursuing outside contributions through publicity, and non-monetary or cash awards for those organizations and employees achieving significant accomplishments with challenge cost share work.

4. Develop and publish a statewide annual report outlining all challenge cost share work including: direct monetary contributions, volunteer labor, contributed materials and equipment, overall program accomplishments, and Bureau costs to support the effort.

5. Actively encourage contributors to protect their investments by getting involved in monitoring, identifying maintenance needs and actual project maintenance.

## Financial Planning Sheet

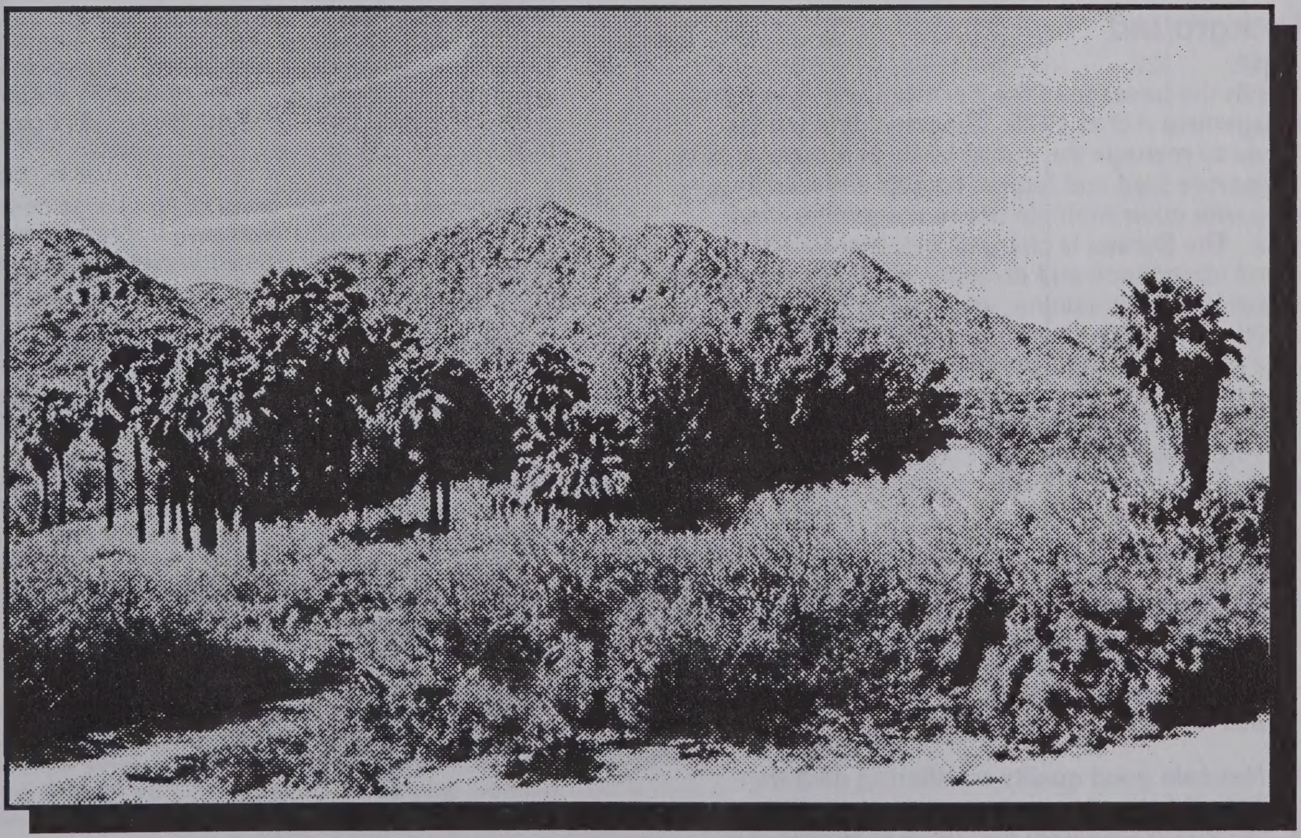
**CHALLENGE COST SHARE**

| Objective<br>#: A.4.-all<br>Workload Measures | FISCAL YEARS | | | | | | | | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1990-1991 | | 1992-1993 | | 1994-1995 | | 1996-2000 | | | |
| | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) |
| 1. Inventory: 000s Acres | | | | | | | | | | |
| 2. Monitoring: # Plans | | | | | | | | | | |
| 3. Project Develop: # Projects | | | | | | | | | | |
| 4. Reintroductions: # by Species | | | | | | | | | | |
| 5. Plans to be Developed: # HMPs, ACECs, CMAs, CRMPs | | | | | | | | | | |
| 6. Coop. Agreements/ MOUs: # Needed: | 8 | 16 | 12 | 24 | 12 | 24 | 24 | 48 | 56 | 112 |
| 7. Maintenance: # projects maintained | | | | | | | | | | |
| 8. Recovery Plans: # to be Developed | | | | | | | | | | |
| 9. Acquisition and Exchange: # Projects | | | | | | | | | | |
| 10. Research | | | | | | | | | | |
| **Total Cost for Objective** | | 16 | | 24 | | 24 | | 48 | | 112 |
| Staffing/Skills Required: (# and type of positions; workmonth cost has been incorporated in workload measure estimates) | | | | | | | | | | |

# *B. Wildlife Habitat Managment Program*

As the quantity and quality of wildlife habitat on private lands are impacted, the rich array of habitats on public lands in California becomes increasingly important to the maintenance of the State's wildlife heritage. The basic purpose of the Wildlife Habitat Management component is to manage the public lands in California in a manner that will provide habitat for wildlife through inputs into resource mangement plans and subsequent implementation of management decisions, coordination of day-to-day land use decisions on the ground, and implementation of habitat management and improvement projects.

Since the Wildlife Habitat Management component is so broad, this document presents a discussion of the overall habitat management program, followed by individual discussions of more specific aspects of the program. This section also highlights individual emphases within these program aspects. These discussions include summaries of needs to effectively manage this component through the year 2000.



# 1. WILDLIFE HABITAT MANAGEMENT PROGRAM

## Issues

1. BLM is mandated to maintain a natural abundance and biological diversity of fish and wildlife resources on public lands.
2. As the quality and quantity of wildlife habitat on private lands become increasingly impacted, habitat on public lands plays an increasingly important role in the maintenance of viable populations of wildlife.
3. Public lands also will be subject to increasing competitive uses which may impact wildlife and habitat.
4. Personnel and budget have not kept pace with BLM's increasing responsibilities with regard to habitat management.

## Background

With the passage of the Federal Land Policy and Management Act in 1976, Congress directed the Bureau to manage the public lands in a manner that will provide food and habitat for fish and wildlife along with other multiple use management mandates. The Bureau is charged with maintaining a natural abundance and diversity of wildlife resources by restoring, maintaining, and enhancing habitat conditions through management plans and actions integrated with other uses of public lands through coordination with other programs, by management initiatives, and through direct habitat improvement projects, as well as through coordination with the State.

## Objectives

1. Acquire and maintain good quality inventories and data bases to provide accurate information for land use planning, activity planning, environmental analysis, and day-to-day activities.
2. Maintain good quality monitoring data with appropriate analysis to ensure understanding of current condition and trend of wildlife and its habitat.
3. Develop well coordinated activity plans that integrate wildlife objectives into contrasting resource uses.
4. Integrate State fish, game, and non-game wildlife population objectives into land use and activity plans to ensure that Bureau lands provide the quantity and quality of habitat to support these objectives.
5. Restore, maintain, and improve wildlife habitat conditions through the preparation and implementation of program-specific activity plans, such as HMPs and Wildlife ACECs, as prescribed in MFPs and RMPs.
6. Maintain or improve public lands for wildlife use through habitat improvement projects that provide high quality wildlife habitats by eliminating major limiting factors, as called for in site-specific management plans and decision documents.
7. Maintain an ecological approach to managing habitats on public lands.
8. Develop a strong information and education program to inform the public of wildlife values on public lands, and what the Bureau is doing to maintain or improve wildlife habitats.
9. Maintain an active program of challenge cost share project development and implementation in coordination with other agencies and private entities.
10. Coordinate with USFWS, CDFG, and any other interested parties in the development and implementation of wildlife and fisheries program objectives.
11. Maintain and increase an active research program, especially with regard to species and habitats of special management concern.
12. Identify and seek to achieve the desired plant communities necessary to support wildlife species of management emphasis.
13. Make land tenure adjustments or acquire easements to provide public access to public lands for consumptive and non-consumptive uses of wildlife, and to improve the quality and quantity of wildlife habitat.

## Financial Planning Sheet

**WILDLIFE HABITAT MANAGEMENT PROGRAM SUMMARY***

| Objective #: B.1.-all | FISCAL YEARS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1990-1991 | | 1992-1993 | | 1994-1995 | | 1996-2000 | | TOTAL | |
| Workload Measures | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) |
| 1. Inventory: 000s Acres | 320 | 258 | 320 | 280 | 340 | 328 | 1300 | 1227 | 2280 | 2093 |
| 2. Monitoring: # Plans | 36 | 209 | 43 | 246 | 50 | 296 | 76 | 679 | 205 | 1430 |
| 3. Project Develop: # Projects | 57 | 490 | 59 | 534 | 62 | 601 | 205 | 2105 | 383 | 3730 |
| 4. Reintroductions: # by Species | 11 | 80 | 12 | 80 | 12 | 80 | 40 | 320 | 75 | 560 |
| 5. Plans to be Developed: # HMPs, ACECs, CMAs, CRMPs | 11 | 94 | 12 | 116 | 11 | 111 | 34 | 421 | 68 | 742 |
| 6. Coop. Agreements/ MOUs: # Needed: | 11 | 46 | 12 | 59 | 11 | 56 | 44 | 237 | 78 | 398 |
| 7. Maintenance: # projects maintained | 138 | 72 | 182 | 157 | 228 | 283 | 406 | 935 | 954 | 1447 |
| 8. Recovery Plans: # to be Developed | | | | | | | | | | |
| 9. Acquisition and Exchange: # Projects | 10 | 11246 | 10 | 12306 | 10 | 13594 | 34 | 19024 | 64 | 56170 |
| 10. Research | 2 | 100 | 2 | 200 | 2 | 300 | 4 | 400 | 10 | 1000 |
| Total Cost for Objective | | 12595 | | 13978 | | 15649 | | 25348 | | 67570 |

| | |
|---|---|
| Staffing/Skills Required: (# and type of positions; workmonth cost has been incorporated in workload measure estimates) | Nine additional Wildlife Biologists<br>Two additional Realty Specialists<br>Two additional Engineers<br>One additional Biostatistician<br>One additional Contract/Procurement specialist<br>*includes big game, upland game, wetlands/waterfowl, raptors, plus additional overall program needs for personnel spread over more than one of these subcomponents. |

## *a. Big Game*

### Issues

1. There is a significant demand by the public for consumptive and non-consumptive use of big game species.

2. Habitat for big game species is decreasing for a variety of reasons, including urban expansion, decreasing suitability of vegetative communities due in part to an active past fire suppression program, and the occurrence of competing uses on big game ranges.

3. As private lands are subject to an increasing amount of habitat impacts, Bureau lands become increasingly important for the management of big game species.

4. There is a need to maintain and, where possible, improve habitat quality on public lands.

### Background

A variety of big game species occur on public lands in California. The most widespread species is deer, but Bureau lands also support populations of bighorn sheep, tule elk, pronghorn antelope, black bear, and feral pig. Some species, such as pronghorn antelope, are increasing in population numbers; over 95% of the pronghorn population is dependent upon Bureau lands during at least part of its life cycle. Other species' populations are stable or declining. Much of the decline is due to human-related disturbances (urban expansion, competing uses), and to the decreasing suitability of vegetation within the remaining wildlands as big game habitat. The Bureau can play an important role in the perpetuation of big game populations through an active program of habitat enhancement and protection. Support for this is present both from the California Department of Fish and Game (through its Hill Bill program, which provides monetary contributions to BLM for the improvement of deer habitat as well as for survey work), and from private organizations such as the Rocky Mountain Elk Foundation, Society for the Conservation of Bighorn Sheep, Foundation for North American Wild Sheep, and Desert Bighorn Council (on the national level) and local sportsmen's groups. BLM has provided input into over 30 Deer Herd Management Plans authored by the California Department of Fish and Game.

### Objectives

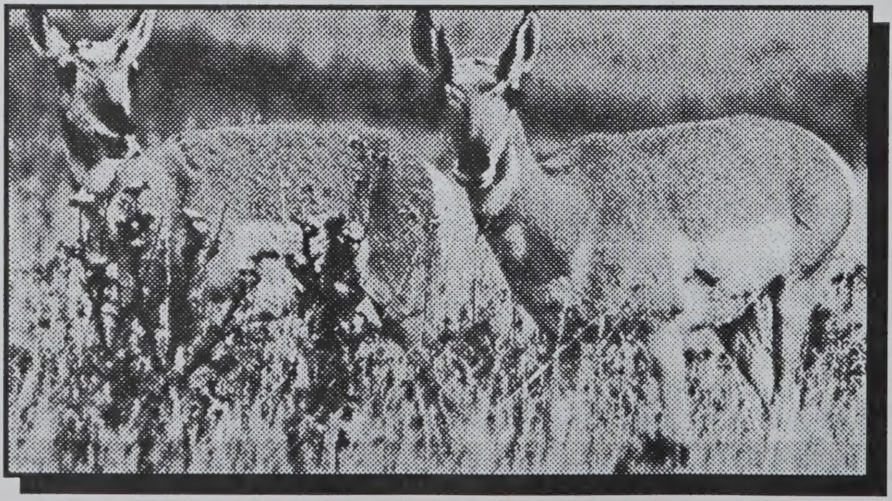
1. Identify important big game habitats and ensure their consideration in the preparation of Resource Management Plans.

2. Prepare site-specific management plans called for in Management Framework Plans and Resource Management Plans, and provide input into plans prepared by CDFG.

3. Complete projects according to established activity plan time frames that will eliminate major limiting factors identified during land use plan preparation or other management decisions. These can include water source development, prescribed burning and other vegetation manipulation, fencing, and other projects.

4. Implement cooperative plans and projects with other agencies, landowners, and private organizations to maintain or enhance big game habitats, as called for in management plans.

5. Pursue opportunities to make public lands available for transplants of big game species as called for in established management plans.



## Financial Planning Sheet **BIG GAME***

| Objective #: B.1.a.-all<br>Workload Measures | FISCAL YEARS | | | | | | | | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1990-1991 | | 1992-1993 | | 1994-1995 | | 1996-2000 | | | |
| | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) |
| 1. Inventory: 000s Acres | 200 | 30 | 200 | 30 | 200 | 30 | 800 | 150 | 1400 | 240 |
| 2. Monitoring: # Plans | 21 | 82 | 24 | 95 | 27 | 111 | 48 | 272 | 120 | 560 |
| 3. Project Develop: # Projects | 20 | 152 | 20 | 155 | 20 | 161 | 66 | 572 | 126 | 1040 |
| 4. Reintroductions: # by Species | 9 | 50 | 10 | 50 | 10 | 50 | 32 | 200 | 61 | 350 |
| 5. Plans to be Developed: # HMPs, ACECs, CMAs, CRMPs | 4 | 30 | 4 | 32 | 3 | 18 | 7 | 52 | 18 | 132 |
| 6. Coop. Agreements/ MOUs: # Needed: | 2 | 15 | 2 | 18 | 2 | 21 | 10 | 85 | 16 | 139 |
| 7. Maintenance: # projects maintained | 112 | 32 | 126 | 38 | 140 | 44 | 178 | 77 | 556 | 191 |
| 8. Recovery Plans: # to be Developed | | | | | | | | | | |
| 9. Acquisition and Exchange: # Projects | 10 | 5246 | 10 | 5286 | 10 | 5381 | 34 | 15739 | 64 | 31652 |
| 10. Research | 2 | 100 | 2 | 200 | 2 | 300 | 4 | 400 | 10 | 1000 |
| Total Cost for Objective | | 5737 | | 5904 | | 6116 | | 17547 | | 35304 |
| Staffing/Skills Required: (# and type of positions; workmonth cost has been incorporated in workload measure estimates) | One additional Wildlife Biologist (Bighorn Specialist)<br>*includes desert bighorn, tule elk and other big game species | | | | | | | | | |

## 1) Desert Bighorn Sheep

### Issue

1. Desert bighorn sheep populations have declined significantly in the past century.
2. The majority of current and potential habitat for desert bighorn occurs on public land.
3. BLM should maximize its unique opportunity to manage the 80% of all desert bighorn sheep habitat (rangewide) that is under its immediate control.

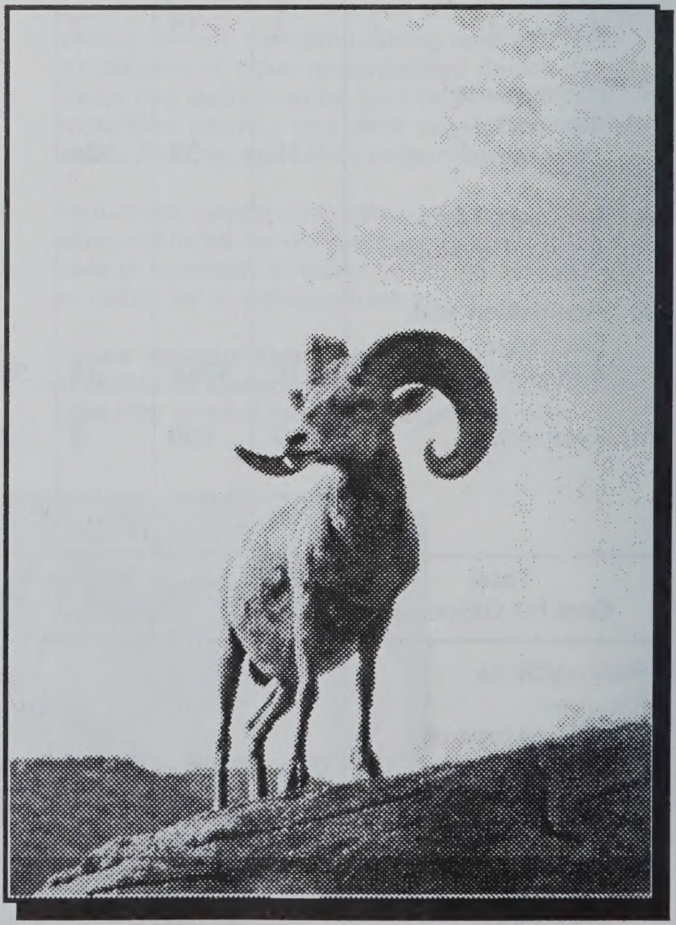
### Background

Rangewide, desert bighorn sheep populations have declined from several hundred thousand in historic times to approximately 16,000 today (4,800 of which live in California). The causes for this decline include disease, habitat destruction, competition with feral burros, overgrazing by livestock, and exploitative hunting (although hunting is no longer a cause of decline nor a factor preventing recovery). In California there are only 9 populations of 100 or more sheep. Populations of less than 125 are not considered viable by some biologists. Two of the three subspecies of bighorn found in California (California bighorn and Peninsular bighorn) are federal candidates for listing as threatened or endangered species. Therefore, the welfare of the desert bighorn is still precarious. However, there are an additional 17 habitat areas in California that could support viable bighorn populations. BLM has participated in successful relocations which established three herds (in the Whipples, Sheep Hole Mountains, and Argus Range). Two herds on BLM lands are large and have provided animals for several transplants.

Current efforts at managing bighorn center on the cooperative development of big game guzzlers (of which 39 of 45 in Southern California are located on public land) and relocation of bighorn into historic or under-utilized habitat (often on Public Land), and the removal of feral burros from BLM lands. All the bighorn habitat areas in California are either managed under a special designation (such as ACEC or Wilderness Study Area), have a Habitat Management Plan in place, or are scheduled to have such a plan developed. The success of these efforts is indicated in part by the explosive expansion of two bighorn herds and the subsequent initiation by the California Department of Fish and Game in 1987 of the first desert bighorn hunting season in California in over 100 years. As a result of this hunt, tens of thousands of dollars of additional revenue was generated by the Department which will be used to further enhance bighorn management.

### Objectives

1. Facilitate the recovery of desert bighorn sheep through a balanced program of inventory, on-the-ground projects, monitoring, and research.
2. Aggressively manage all populations of desert bighorn sheep using the best scientific information available.
3. Maintain and enhance our close cooperative efforts, directed at habitat enhancement and relocation projects, with the California Department of Fish and Game and private organizations dedicated to bighorn sheep (including but not limited to the Desert Bighorn Council, the Society for the Conservation of Bighorn Sheep, and the Foundation for North American Wild Sheep).



## Financial Planning Sheet

**DESERT BIGHORN SHEEP**

| | FISCAL YEARS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1990-1991 | | 1992-1993 | | 1994-1995 | | 1996-2000 | | TOTAL | |
| Objective #: B.1,a.1)-all<br>Workload Measures | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) |
| 1. Inventory: 000s Acres | 100 | * | 100 | | 100 | | 250 | | 550 | |
| 2. Monitoring: # Plans | 12 | 48 | 15 | 60 | 18 | 72 | 21 | 84 | 66 | 264 |
| 3. Project Develop: # Projects | 4 | 80 | 4 | 80 | 4 | 80 | 9 | 180 | 21 | 420 |
| 4. Reintroductions: # by Species | 8 | 10 | 8 | 10 | 8 | 10 | 24 | 30 | 48 | 60 |
| 5. Plans to be Developed: # HMPs, ACECs, CMAs, CRMPs | 3 | 18 | 3 | 18 | 3 | 18 | 6 | 36 | 15 | 90 |
| 6. Coop. Agreements/ MOUs: # Needed: | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 1 |
| 7. Maintenance: # projects maintained | 100 | 20 | 108 | 22 | 116 | 24 | 124 | 25 | 448 | 91 |
| 8. Recovery Plans: # to be Developed | | | | | | | | | | |
| 9. Acquisition and Exchange: # Projects | 3 | 30 | 3 | 30 | 3 | 30 | 6 | 60 | 15 | 150 |
| 10. Research | 2 | 100 | 2 | 200 | 2 | 300 | 4 | 400 | 10 | 1000 |
| Total Cost for Objective | | 306 | | 420 | | 534 | | 816 | | 2076 |
| Staffing/Skills Required: (# and type of positions; workmonth cost has been incorporated in workload measure estimates) | One Bighorn Specialist | | | | | | | | | |

*Characteristically conducted by DFG with data supplied to BLM.

## 2) Tule Elk

### Issues

1. Of the 14 free-roaming elk herds in the state, 12 are causing damage to private property. Private lands currently support approximately 50 percent of the State's tule elk herds.

2. A surplus of tule elk exists in all three herds occurring on BLM lands in California. The surplus of elk in the Owens Valley is especially problematic since State and Federal legislation mandates an upper population limit of 490, and the herd currently consists of 560-675 animals.

3. Locating suitable release sites for these surplus elk is a significant problem. Due to unresolvable conflicts with other land uses few areas of Federal land are left for elk relocation. Private land owners are unwilling to accept tule elk on their lands unless they can be assured that elk depredation and population levels can be controlled.

4. Although the tule elk statewide population has exceeded the 2,000 animal population level mandated by State and Federal law there is still significant opposition by some members of the public to sport hunting of elk. These groups through litigation blocked an approved 1988 hunt. However, in the fall of 1989 a tule elk special harvest was successfully conducted.

### Background

Currently in California between 2,200 and 2,700 tule elk occur in 19 individual herds, three of which are on BLM lands. Prior to the 19th century as many as 500,000 tule elk inhabitated the central and coastal valleys of the state, with herds as large as 2,000. By 1870, tule elk were nearly extinct. In 1873 the California legislature granted protection to the elk and the population, which had dwindled to less than 30, began to expand slowly to 400 by 1923. Out of several efforts to relocate elk between 1904 and 1934 only two successful ones resulted in free-ranging herds: that in the Cache Creek area and that in the Owens Valley. In 1971 the California legislature enacted Senate Bill 722, which prohibited the taking of tule elk until the total statewide population exceeds 2,000 animals. This bill also limited the total number of elk inhabiting the Owens Valley to 490.

Federal participation in the preservation of the tule elk began with passage of Public Law 94-389 in 1976. This law concurred with the State legislation and directed the Secretaries of Agriculture, Defense, and the Interior to cooperate with the State in making Federal lands available for elk. In 1977 Congress established a Tule Elk Interagency Task Force made up of BLM, five other Federal agencies, two state agencies, eight conservation organizations, and the Los Angeles Department of Water and Power. The committee developed a Statewide Tule Elk Management Plan in 1979 (revised in 1985) which provided guidelines for the development of individual herd HMPs required by legislation, and coordinated a systematic approach to the achievement of overall State objectives. The committee also provides a periodic status report to Congress.

### Objectives

1. Initiate a tule elk habitat inventory program on public lands in California and adjoining states to evaluate additional relocation sites.

2. Ensure administrative and hunter management in order to maintian tule elk populations in balance with available habitat.

3. Improve and maintain the quality of tule elk habitat within the Cache Creek, Owens Valley, and Pozo tule elk areas.

4. Provide forage and cover annually to support the target population levels for each herd area.

5. Adopt zero percent as the projected allowable decline in quality and quantity calving and primary elk cover habitat.

## Financial Planning Sheet

**TULE ELK**

| Objective<br>#: B.1.a.2)-all<br>Workload Measures | FISCAL YEARS<br>1990-1991<br>UNITS | <br>1990-1991<br>COST ($000) | <br>1992-1993<br>UNITS | <br>1992-1993<br>COST ($000) | <br>1994-1995<br>UNITS | <br>1994-1995<br>COST ($000) | <br>1996-2000<br>UNITS | <br>1996-2000<br>COST ($000) | <br>TOTAL<br>UNITS | <br>TOTAL<br>COST ($000) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. Inventory: 000s Acres | 20 | 21 | 20 | 24 | 20 | 28 | 80 | 134 | 140 | 207 |
| 2. Monitoring: # Plans | 3 | 22 | 3 | 25 | 3 | 29 | 15 | 168 | 24 | 244 |
| 3. Project Develop: # Projects | 6 | 35 | 6 | 41 | 6 | 48 | 24 | 225 | 42 | 349 |
| 4. Reintroductions: # by Species | | | | | | | | | | |
| 5. Plans to be Developed: # HMPs, ACECs, CMAs, CRMPs | 1 | 12 | 1 | 14 | | | 1 | 16 | 3 | 42 |
| 6. Coop. Agreements/ MOUs: # Needed: | 2 | 15 | 2 | 18 | 2 | 21 | 8 | 84 | 14 | 138 |
| 7. Maintenance: # projects maintained | 6 | 6 | 9 | 9 | 12 | 12 | 27 | 27 | 54 | 54 |
| 8. Recovery Plans: # to be Developed | | | | | | | | | | |
| 9. Acquisition and Exchange: # Projects | 3 | 3000 | 3 | 3000 | 3 | 3000 | 12 | 12000 | 21 | 21000 |
| 10. Research | | | | | | | | | | |
| **Total Cost for Objective** | | 3111 | | 3131 | | 3138 | | 12654 | | 22034 |
| Staffing/Skills Required: (# and type of positions; workmonth cost has been incorporated in workload measure estimates) | | | | | | | | | | |

## *b. Upland Game*

### Issues

1. There is a public demand for both consumptive and non-consumptive uses of upland game.
2. Additional inventory information is needed on many upland game populations on public lands.
3. Management of upland game habitat is not well coordinated overall, nor are management actions effectively monitored to determine their effects.
4. As urbanization and other competing uses impact habitat on private lands, public lands will become increasingly important as upland game habitat.

### Background

Although Bureau lands in California provide habitat for a variety of upland game birds and small mammals, additional information is needed on distribution, population levels, and population status. Key habitat areas for many species need to be identified. Upland game habitat is increasingly subject to pressure from urban expansion and other competing uses. The Bureau can play an important role in the perpetuation of upland game populations through effective habitat management.

### Objectives

1. Inventory upland game habitat to obtain information for more effective management, including determination of key habitat areas, and population status and trend.
2. Integrate the needs of upland game into land use decision making in Resource Management Plans, site specific activity plans, and individual land use allocation decisions.
3. Coordinate with CDFG to determine goals for management of upland game habitat.
4. Complete project work as called for in activity plans to maintain and improve upland game habitat.

## Financial Planning Sheet UPLAND GAME

| Objective #: B.1.b.-all Workload Measures | FISCAL YEARS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1990-1991 | | 1992-1993 | | 1994-1995 | | 1996-2000 | | TOTAL | |
| | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) |
| 1. Inventory: 000s Acres | 20 | 30 | 20 | 30 | 40 | 60 | 160 | 250 | 240 | 370 |
| 2. Monitoring: # Plans | | | | | | | | | | |
| 3. Project Develop: # Projects | 20 | 100 | 20 | 100 | 20 | 100 | 80 | 400 | 140 | 700 |
| 4. Reintroductions: # by Species | 1 | 20 | 1 | 20 | 1 | 20 | 4 | 80 | 7 | 140 |
| 5. Plans to be Developed: # HMPs, ACECs, CMAs, CRMPs | 2 | 10 | 2 | 12 | 2 | 14 | 8 | 64 | 14 | 100 |
| 6. Coop. Agreements/ MOUs: # Needed: | 1 | 5 | 1 | 5 | 1 | 5 | 4 | 20 | 7 | 35 |
| 7. Maintenance: # projects maintained | 20 | 5 | 40 | 10 | 60 | 15 | 140 | 35 | 260 | 65 |
| 8. Recovery Plans: # to be Developed | | | | | | | | | | |
| 9. Acquisition and Exchange: # Projects | | | | | | | | | | |
| 10. Research | | | | | | | | | | |
| Total Cost for Objective | | 170 | | 177 | | 214 | | 849 | | 1410 |
| Staffing/Skills Required: (# and type of positions; workmonth cost has been incorporated in workload measure estimates) | | | | | | | | | | |

## c. *Wetlands/Waterfowl*

### Issues

1. Large-scale alterations of wetland areas have occurred due to agriculture, urbanization, and industrial activities. In California less than 10 percent of the original wetland areas remain. These losses have been most pronounced in the Central Valley.

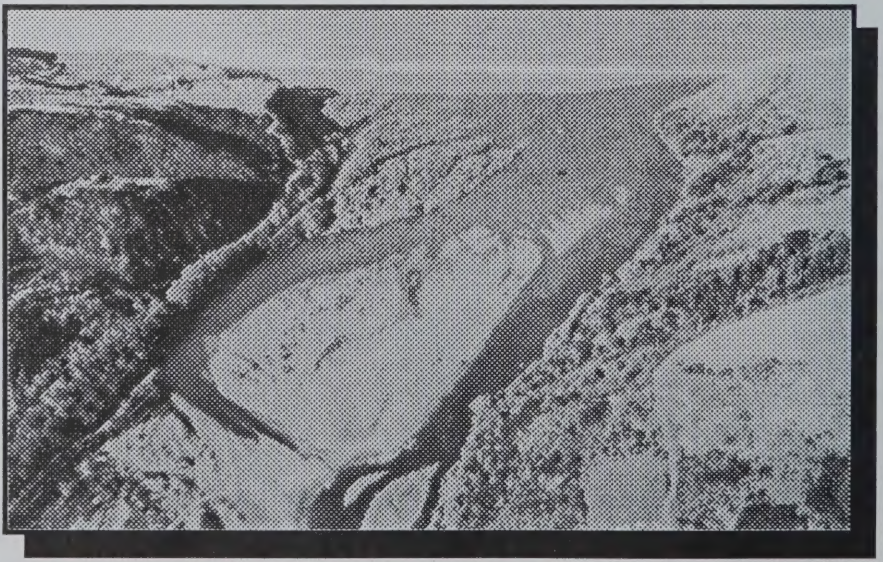
2. Loss of nesting cover, wetland drainage, and degradation of migration and wintering habitat have contributed to long-term downward trends in some important waterfowl populations.

3. BLM wetlands have not reached their potential to support waterfowl and other wetland wildlife. These Federally owned wetlands are especially important due to the widespread loss of wetlands state wide.

4. There is a need to intensify management efforts on an additional 24 existing waterfowl areas on public lands in California.

### Background

Wetlands provide many benefits to the public including flood, erosion, and storm damage control, water quality maintenance, outdoor recreation, fish and wildlife resources, and research and educational opportunities. BLM currently administers 139,000 acres of wetlands in California, primarily in the Susanville and Bakersfield Districts. In 1986 the United States and Canada jointly developed the North American Waterfowl Management Plan to establish waterfowl population goals. In 1987 BLM developed a strategic plan, finalized in 1989, for waterfowl management on public lands. This plan describes BLM's role in implementation of the North American Waterfowl Management Plan, identifies resource opportunities and actions required to accomplish national-level waterfowl goals as outlined in the Bureau's Fish and Wildlife 2000 plan, and provides a framework for wetland habitat management Bureauwide. During the course of developing this plan, 229 Waterfowl Habitat Management Areas (WHMAs) were identified on BLM lands. Twenty-four of these WHMAs occur in California. The number of WHMAs in California will greatly increase after wetland enhancement actions are implemented.



### Objectives

1. Develop HMPs for the remaining 21 WHMAs.

2. Acquire 127,000 acres of wetland habitat through exchange, donation, or purchase within or adjacent to 13 WHMAs. Acquire an additional 5,000 - 10,000 acres of wetlands in the Central Valley.

3. Improve 5,600 acres of existing wetland habitat in19 WHMAs.

4. Develop an additional 20,500 acres of wetland habitat on 6 WHMAs.

5. Maintain 4,300 acres of wetland habitat in acceptable condition on 10 WHMAs.

6. Conduct inventories of wetland habitat to determine condition and management potential.

7. Coordinate with appropriate Federal and State agencies, and public and private conservation organizations.

8. Design and implement a cooperative wetlands enhancement research program.

# Financial Planning Sheet

**WETLANDS/ WATERFOWL**

| | FISCAL YEARS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Objective #: B.1.c.-all<br>Workload Measures | 1990-1991 | | 1992-1993 | | 1994-1995 | | 1996-2000 | | TOTAL | |
| | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) |
| 1. Inventory: 000s Acres | 10 | 38 | 10 | 40 | 10 | 42 | 40 | 187 | 70 | 307 |
| 2. Monitoring: # Plans | 12 | 67 | 16 | 89 | 20 | 112 | 20 | 100 | 68 | 368 |
| 3. Project Develop: # Projects | 10 | 198 | 12 | 238 | 15 | 298 | 45 | 1048 | 82 | 1782 |
| 4. Reintroductions: # by Species | | | | | | | | | | |
| 5. Plans to be Developed: # HMPs, ACECs, CMAs, CRMPs | 2 | 24 | 3 | 42 | 3 | 49 | 13 | 245 | 21 | 360 |
| 6. Coop. Agreements/ MOUs: # Needed: | 2 | 10 | 3 | 18 | 2 | 12 | 6 | 42 | 13 | 82 |
| 7. Maintenance: # projects maintained | 6 | 35 | 16 | 109 | 28 | 224 | 88 | 823 | 138 | 1191 |
| 8. Recovery Plans: # to be Developed | | | | | | | | | | |
| 9. Acquisition and Exchange: # Projects | 4 | 6000 | 4 | 7020 | 4 | 8213 | 16 | 32850 | 28 | 54083 |
| 10. Research | | | | | | | | | | |
| Total Cost for Objective | | 6372 | | 7556 | | 8950 | | 35295 | | 58173 |
| Staffing/Skills Required: (# and type of positions; workmonth cost has been incorporated in workload measure estimates) | One additional Realty Specialist<br>One additional Engineering Technician | | | | | | | | | |

## *d. Raptors*

### Issues

1. In recent years, public interest in and support for raptors has increased dramatically.
2. Impacts to raptors and their habitats, and to the habitats of their prey species, will increase significantly over the next decade as California's human population increases.
3. As raptor habitats are lost or become increasingly fragmented on private lands, public lands will become increasingly important to raptor populations.
4. Aggressive conservation and management programs by the Bureau on behalf of raptors will be necessary over the next decade to offset impacts associated with human population growth and urban expansion.

### Background

Twenty-three species of diurnal raptors and 14 owl species are known to occur on Bureau lands in California as residents, migrants, or casual visitors. These include the peregrine falcon, bald eagle, Swainson's hawk, and great gray owl, all Federal- or State-listed threatened or endangered species. The northern spotted owl, a species proposed for Federal listing as threatened, also occurs on Bureau lands in California. Bureau lands contain habitats formerly used by the California condor; however, all members of this endangered species were removed from the wild by 1987 and are presently contained within two captive breeding facilities. The eventual return of the California condor to the wild is planned.

As human populations and urban expansion increase throughout the state, raptor habitats on BLM lands will become increasingly important to the survival of many species. Habitat for prey species, sites for breeding and rearing young, habitat for winter survival, and abundant open space for normal dispersion of young, migratory movements, and territorial defense must be maintained for all species.

### Objectives

1. Identify key nesting, wintering, and feeding habitats and migration corridors for all raptor species occurring on BLM lands in California.
2. Increase management programs within key habitats as well as throughout the known and future identified habitats.
3. Incorporate raptor habitat and prey management concerns in all land use and activity plans.
4. Develop monitoring programs of raptor populations, raptor habitats, and raptor prey species to ensure their long-term conservation.

| | Financial Planning Sheet RAPTORS* | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Objective<br>#: `B.1.d.-all`<br>Workload Measures | FISCAL YEARS | | | | | | | | | |
| | 1990-1991 | | 1992-1993 | | 1994-1995 | | 1996-2000 | | TOTAL | |
| | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) |
| 1. Inventory: 000s Acres | 90 | 160 | 90 | 180 | 90 | 196 | 300 | 640 | 570 | 1176 |
| 2. Monitoring: # Plans | 3 | 60 | 3 | 62 | 3 | 73 | 8 | 307 | 17 | 502 |
| 3. Project Develop: # Projects | 7 | 40 | 7 | 41 | 7 | 42 | 14 | 85 | 35 | 208 |
| 4. Reintroductions: # by Species | 1 | 10 | 1 | 10 | 1 | 10 | 4 | 40 | 7 | 70 |
| 5. Plans to be Developed: # HMPs, ACECs, CMAs, CRMPs | 3 | 30 | 3 | 30 | 3 | 30 | 6 | 60 | 15 | 150 |
| 6. Coop. Agreements/ MOUs: # Needed: | 6 | 16 | 6 | 18 | 6 | 18 | 24 | 90 | 42 | 142 |
| 7. Maintenance: # projects maintained | | | | | | | | | | |
| 8. Recovery Plans: # to be Developed | | | | | | | | | | |
| 9. Acquisition and Exchange: # Projects | | | | | | | | | | |
| 10. Research | | | | | | | | | | |
| Total Cost for Objective | | 316 | | 341 | | 369 | | 1222 | | 2248 |
| Staffing/Skills Required: (# and type of positions; workmonth cost has been incorporated in workload measure estimates) | Two additional Wildlife Biologists<br>* does not include northern spotted owl, bald eagle , or peregrine falcon; these are included in Threatened and Endangered section | | | | | | | | | |

# *e. Inventory and Monitoring*

## Issues

1. Inventory and monitoring are key components of the wildlife management program. BLM must know what is present, and its status and trend, in order to make appropriate management decisions and to test the effectiveness of management actions and mitigations.

2. Because of limited funds and manpower, past emphasis within the wildlife program has focused on activity planning and project implementation, as well as support for other programs.

3. Few inventories have been completed in areas where issues have not focused the expenditure of manpower and funding.

4. There is a critical need to update resource inventories, especially of species and habitats of special management concern, as well as to carry out an active monitoring program with regard to species status and trend, effectiveness of management actions, and effectiveness of mitigations of the permitted activities of other programs. Only then can BLM refine its management actions to increase effectiveness and efficiency.

## Background

A Technical Procedures Review of the Fish and Wildlife Program was carried out in California in 1989. The review concluded that BLM in California was complying with policy within the capability of existing resources. However, current inventories and monitoring are not adequate to meet program objectives.

Inventory and monitoring activities generally focus on a limited number of special status species and other high priority species and habitats. In many cases inventory is done reactively to other initiatives (such as applications submitted by project proponents) rather than pro-actively.

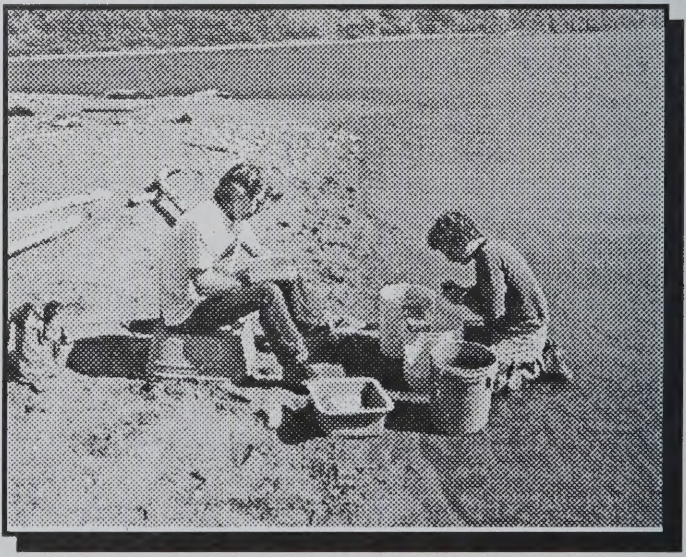
Inventory and monitoring needs over the next 10 years are identified as part of each overall topic's write-up in the California Fish and Wildlife 2000 document. They are addressed here to focus attention on this critical need within the Fish and Wildlife Program.

## Objectives

1. Continue to acquire and maintain a good quality inventory data base which provides accurate information for land use planning, activity planning, environmental analysis, and day to day Bureau activities; the inventory data base also serves as baseline data for monitoring efforts. Manage this information through the use of a data base.

2. Increase monitoring efforts to determine the effectiveness of habitat management projects and mitigation strategies, and to determine the effects of the implementation of land use allocation decisions and casual (non-permited) land uses.

3. Develop and implement an inventory and monitoring schedule which will assure the accomplishment of data collection and analysis beyond the year 2000.



## Financial Planning Sheet

**INVENTORY AND MONITORING SUMMARY** *

| Objective #: B.1.e.-all Workload Measures | FISCAL YEARS | | | | | | | | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1990-1991 | | 1992-1993 | | 1994-1995 | | 1996-2000 | | | |
| | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) |
| 1. Inventory: 000s Acres | 2606 | 2123 | 4785 | 3149 | 4437 | 2879 | 4129 | 4109 | 15957 | 12260 |
| 2. Monitoring: # Plans | 158 | 1981 | 178 | 3060 | 207 | 3640 | 430 | 9523 | 973 | 18204 |
| 3. Project Develop: # Projects | | | | | | | | | | |
| 4. Reintroductions: # by Species | | | | | | | | | | |
| 5. Plans to be Developed: # HMPs, ACECs, CMAs, CRMPs | | | | | | | | | | |
| 6. Coop. Agreements/ MOUs: # Needed: | | | | | | | | | | |
| 7. Maintenance: # projects maintained | | | | | | | | | | |
| 8. Recovery Plans: # to be Developed | | | | | | | | | | |
| 9. Acquisition and Exchange: # Projects | | | | | | | | | | |
| 10. Research | | | | | | | | | | |
| Total Cost for Objective | | 4104 | | 6209 | | 6519 | | 13632 | | 30464 |
| Staffing/Skills Required: (# and type of positions; workmonth cost has been incorporated in workload measure estimates) | * includes all inventory and monitoring needs identified in the document. | | | | | | | | | |

# *f. Acquisitions/Exchanges in the Wildlife Program*

## Issues

1. There is an ever-increasing need to acquire adjacent and nearby private land containing valuable fish and wildlife habitat in order to more effectively administer key habitat areas managed by BLM. Larger blocks of land are more likely to provide adequate habitat to assure the long-term survival of individual species and ecosystems.

2. Acquisition of land or interest in land should continue to be a cooperative venture by non-profit organizations, State government and the Federal government in order to maximize the results obtained per dollar spent.

3. As habitat on private land is impacted, blocks of BLM land will become increasingly critical to the survival of rare, threatened, or endangered species.

## Background

Fish and wildlife habitat acquisitions are carried out through direct purchase with appropriated funds; exchange between BLM and State agencies, private parties or non-profit organizations; and donation. Habitat is also acquired by State agencies (California Wildlife Conservation Board) and managed cooperatively by BLM. Lands are also being acquired in California through purchase by any of these above agencies using habitat compensation funds collected under Federal and State Endangered Species Act consultations; these funds are then used to offset anticipated impacts associated with proposed development.

Many of the habitat acquisitions in California have been high profile projects requiring increased management capability. These projects have featured highly sensitive resource values. The most noteworthy projects are the Coachella Valley Fringe-toed Lizard Preserve, the Carrizo Plain project, the Desert Tortoise Natural Area, Chuckwalla Bench (desert tortoise habitat) and the Merced, American and North Fork of the Sacramento Rivers. Significant habitat has also been acquired in the Conway Summit area near Bishop.

## Objectives

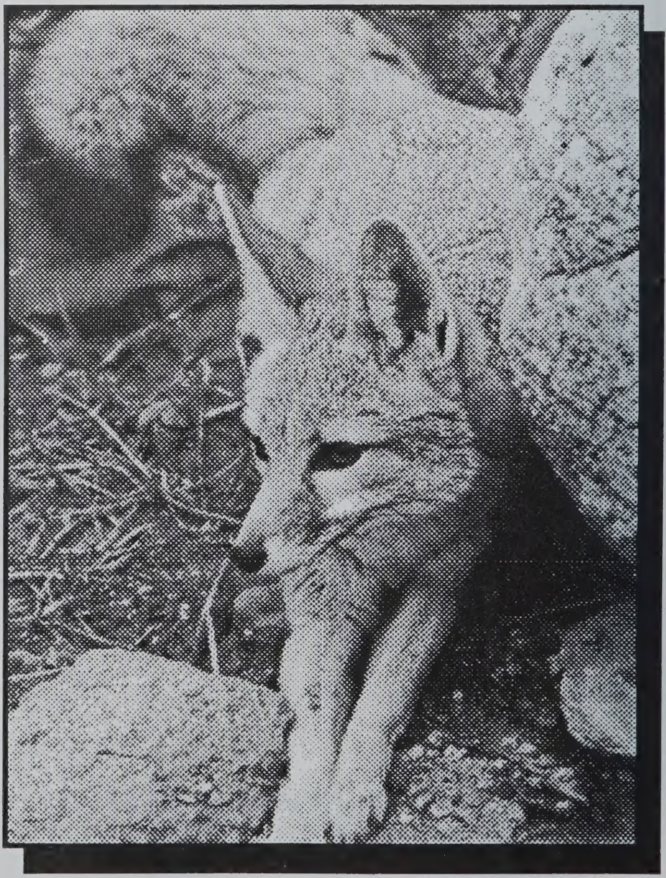
1. Continue to take an aggressive approach to acquiring lands that contain significant fish and wildlife habitat, as identified through planning documents.

2. Continue to identify significant habitat areas for acquisition through continued participation in the Significant Natural Area Interagency Committee.

3. Identify costs and funding needs for acquisitions through the year 2000; revise as appropriate.

4. Submit requests for appropriate levels of funding to support increased levels of exchanges and acquisitions.

5. Continue to cooperate with CDFG, the California Wildlife Conservation Board, and non-profit private organizations such as The Nature Conservancy and Trust for Public Lands in efforts to acquire key habitat areas.



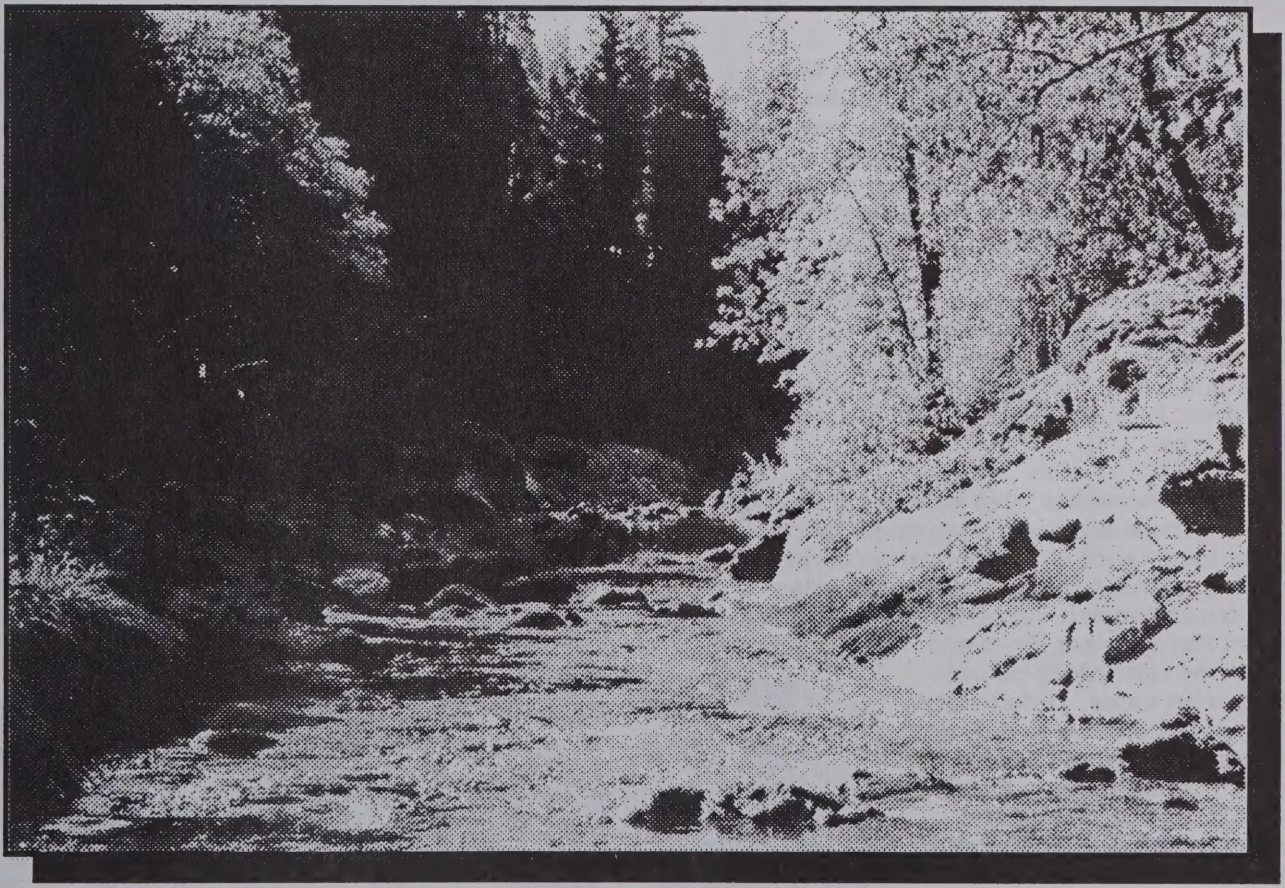
## Financial Planning Sheet

## ACQUISITIONS & EXCHANGES SUMMARY*

| | FISCAL YEARS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Objective #: B.1.f.-all | 1990-1991 | | 1992-1993 | | 1994-1995 | | 1996-2000 | | TOTAL | |
| Workload Measures | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) |
| 1. Inventory: 000s Acres | | | | | | | | | | |
| 2. Monitoring: # Plans | | | | | | | | | | |
| 3. Project Develop: # Projects | | | | | | | | | | |
| 4. Reintroductions: # by Species | | | | | | | | | | |
| 5. Plans to be Developed: # HMPs, ACECs, CMAs, CRMPs | | | | | | | | | | |
| 6. Coop. Agreements/ MOUs: # Needed: | | | | | | | | | | |
| 7. Maintenance: # projects maintained | | | | | | | | | | |
| 8. Recovery Plans: # to be Developed | | | | | | | | | | |
| 9. Acquisition and Exchange: # Projects | 51 | 29729 | 59 | 33314 | 59 | 36082 | 184 | 111604 | 354 | 210729 |
| 10. Research | | | | | | | | | | |
| **Total Cost for Objective** | | 29729 | | 33314 | | 36082 | | 111604 | | 210729 |
| Staffing/Skills Required: (# and type of positions; workmonth cost has been incorporated in workload measure estimates) | Four additional Realty Specialists<br>*includes all acquisition and exchange needs identified in the document | | | | | | | | | |

# C. *Riparian Area Management Program*

Riparian area management is a crucial component of the Bureau's Fish and Wildlife Program in California. The following discussion presents riparian program needs through the year 2000.



# 1. RIPARIAN AREA MANAGEMENT

## Issue

1. Healthy riparian areas provide for highly productive wildlife and fisheries habitat and biologocal diversity, high quality water, aesthetic values and forage for livestock. Since many public land riparian areas are in less than satisfactory condition there is a need to improve management and enhance riparian area conditions.

## Background

While past efforts by BLM in California have shown great success in improving degraded riparian areas, these efforts have been limited to only a few locales within the State. Of the BLM riparian areas classified to date only half are meeting management objectives; additionally about one-quarter of the riparian areas on public land have not been classified at this point. Since healthy, functioning riparian areas produce dramatic benefits to fish and wildlife habitat, erosion control, forage production, late season streamflow, water quality and recreational enjoyment, it is important that the condition of riparian areas be a key factor in land use management practices.

BLM in California has been addressing this need for improved riparian area management by emphasizing the importance of riparian values during Resource Management Plans, identifying riparian ACECs, modifying existing activity plans such as Allotment Management Plans and placing some restrictions on uses within riparian zones. Unfortunately progress has been slow to date due to the large number and wide variety of riparian zones in California and the limited funding and personnel available to address the issue.

## Objectives

1) Identify and inventory all riparian areas on public lands by the year 1992.

2) Identify specific riparian area management objectives and management actions necessary to improve riparian conditions in each RMP and/ or activity plan as it is developed or updated.

3) Implement or revise existing activity plans to provide for improved management of riparian areas by 1995 through management practices and project development.

4) Monitor and evaluate riparian management actions as scheduled by activity plans to ensure the plan objectives are being met.

5) Meet management objectives in at least half of the number of identified riparian areas by 1996.

6) Involve the public at all stages of riparian area problem identification, planning and implementation in order to foster public ownership of riparian area improvement actions.

7) Provide reports and present technical papers to the public and specialists in order to promote more widespread understanding of BLM riparian managenment efforts and successes.

8) Conduct research which may be necessary to better identify riparian system natural processes and the likely results of different management actions.

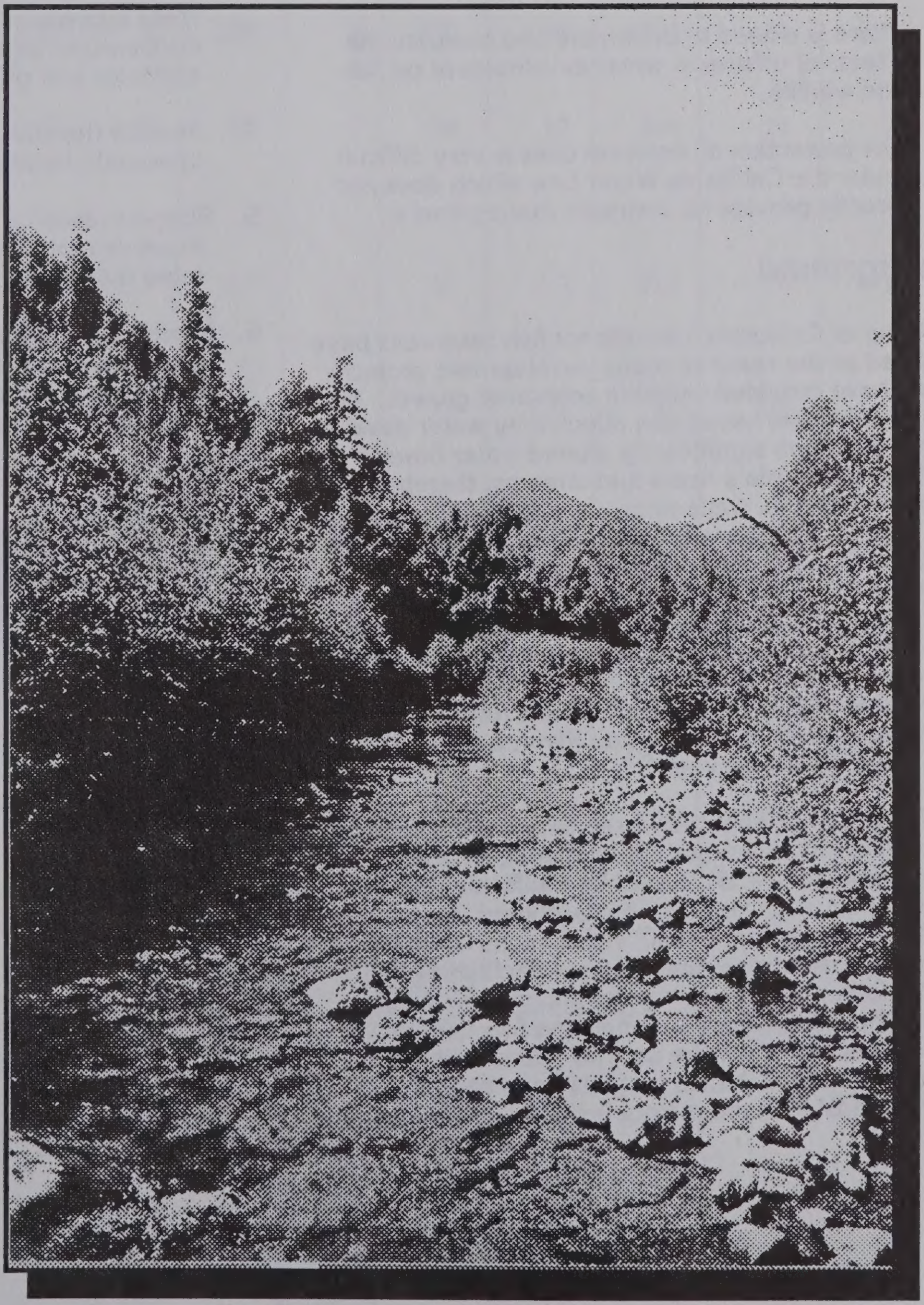
## Financial Planning Sheet

**RIPARIAN AREA MANAGEMENT**

| Objective #: C.1.-all<br>Workload Measures | FISCAL YEARS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1990-1991 | | 1992-1993 | | 1994-1995 | | 1996-2000 | | TOTAL | |
| | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) |
| 1. Inventory: 000s Acres | 39 | 434 | 16 | 276 | 0 | 0 | 0 | 0 | 55 | 710 |
| 2. Monitoring: # Plans | 36 | 236 | 35 | 348 | 35 | 348 | 70 | 696 | 176 | 1628 |
| 3. Project Develop: # Projects | 98 | 1080 | 140 | 1440 | 140 | 1440 | 176 | 1800 | 553 | 5760 |
| 4. Reintroductions: # by Species | | | | | | | | | | |
| 5. Plans to be Developed: # HMPs, ACECs, CMAs, CRMPs | 18 | 90 | 50 | 246 | 50 | 246 | 50 | 246 | 168 | 828 |
| 6. Coop. Agreements/ MOUs: # Needed: | 4 | 42 | 13 | 126 | 13 | 126 | 13 | 126 | 43 | 420 |
| 7. Maintenance: # projects maintained | 70 | 90 | 140 | 180 | 140 | 180 | 700 | 900 | 1050 | 1350 |
| 8. Recovery Plans: # to be Developed | | | | | | | | | | |
| 9. Acquisition and Exchange: # Projects | 3 | 1150 | 3 | 1150 | 3 | 1150 | 12 | 4620 | 21 | 8070 |
| 10. Research | | | | | | | | | | |
| **Total Cost for Objective** | | 3122 | | 3766 | | 3490 | | 8388 | | 18766 |
| Staffing/Skills Required: (# and type of positions; workmonth cost has been incorporated in workload measure estimates) | Two additional Riparian Coordinators (NRS)<br>Three additional Hydrologists<br>Two additional Range Conservationists<br>Two additional Wildlife Biologist<br>One additional Wildlife Technician<br>One additional Engineering Technician | | | | | | | | | |

# D. *Fisheries Habitat Management Program*

The streams, rivers, lakes, springs, and reservoirs on public lands in California provide spawning, rearing, and other key habitat for cold and warm water fish. Some of these species provide recreational and economic benefits to the population of California, while others are species of special management concern because of their rare, endangered, or threatened status. The following discussion presents fisheries habitat management program needs through the year 2000.



# 1. FISHERIES

## Issues

1. There is insufficient productivity and carrying capacity for fish to assure a biological diversity in a multiple use setting.
2. There is a lack of adequate joint ventures between BLM, other agencies and private organizations in the planning, funding, and implementation of projects and research that preserve or enhance the aquatic and fisheries resource.
3. There is a need to determine and evaluate the effects of offstream water development on fish and wildlife.
4. The protection of instream uses is very difficult under the California Water Law which does not directly provide for instream management.

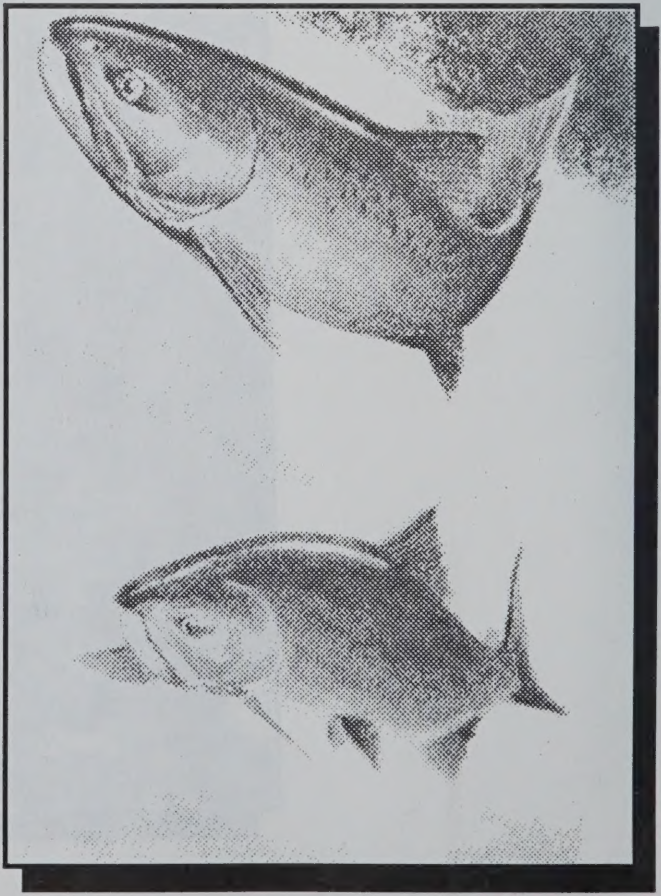
## Background

Many of California's significant fish resources have declined as the result of many development projects which have provided valuable economic growth. Fish and their habitat have been affected by water developments that have significantly altered water flows in many of California's rivers and streams, thereby also affecting riparian, wetland areas, and other important fish habitat components. Throughout the history of California's water development the instream flow needs of fish, wildlife, riparian vegetation and recreation have been largely overlooked. The development of water for out-of-stream uses has impacted many fish populations. An example of this loss is the extirpation of the steelhead trout runs from the Mexican border north to the Russian River, a distance of 300 miles, in just 50 years.

Fish are important public resources with significant economic, environmental, recreational, aesthetic, and educational values. BLM and the California Department of Fish and Game have coauthored 21 aquatic Habitat Management Plans. These plans have a common goal of preventing further declines of fish populations, restoring fish populations to historic levels where possible and enhancing fish habitat where possible. Over the past 20 years, many challenge cost share fisheries projects have been implemented on BLM managed public lands in California.

## Objectives

1. Inventory 220 miles of Bureau-managed aquatic systems that support fish in California.
2. Increase habitat and/or habitat productivity in streams currently utilized by fish but producing below potential.
3. Prepare six aquatic Habitat Management Plans and develop three cooperative habitat management agreements on high priority watersheds in cooperation with major landowners, government agencies and private interest groups.
4. Monitor the effects of actions (projects) as stated in aquatic Habitat Management Plans.
5. Support research and monitoring needed to improve management of fish habitats and determine the effectiveness of habitat improvements.
6. Implement sixty fisheries challenge cost share project proposals in California between BLM, California Department of Fish and Game, and special interest groups.



## Financial Planning Sheet **FISHERIES**

| Objective #: D.1.-all<br>Workload Measures | FISCAL YEARS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1990-1991 | | 1992-1993 | | 1994-1995 | | 1996-2000 | | TOTAL | |
| | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) |
| 1. Inventory: 000s Acres | 3 | 66 | 3 | 66 | 3 | 66 | 15 | 360 | 24 | 558 |
| 2. Monitoring: # Plans | 12 | 66 | 12 | 66 | 12 | 66 | 60 | 300 | 96 | 498 |
| 3. Project Develop: # Projects | 8 | 220 | 8 | 286 | 8 | 320 | 40 | 1700 | 64 | 2526 |
| 4. Reintroductions: # by Species | 3 | 30 | 3 | 30 | 3 | 30 | 12 | 144 | 21 | 234 |
| 5. Plans to be Developed: # HMPs, ACECs, CMAs, CRMPs | 1 | 63 | 1 | 63 | 1 | 63 | 3 | 210 | 6 | 399 |
| 6. Coop. Agreements/ MOUs: # Needed: | 4 | 12 | 4 | 12 | 4 | 12 | 16 | 48 | 28 | 84 |
| 7. Maintenance: # projects maintained | 12 | 80 | 14 | 80 | 20 | 151 | 100 | 755 | 146 | 1066 |
| 8. Recovery Plans: # to be Developed | | | | | | | | | | |
| 9. Acquisition and Exchange: # Projects | 1 | 3000 | 1 | 3000 | 1 | 3000 | 4 | 12000 | 7 | 21000 |
| 10. Research | 4 | 100 | 4 | 120 | 4 | 144 | 16 | 576 | 28 | 940 |
| Total Cost for Objective | | 3637 | | 3723 | | 3852 | | 16093 | | 27305 |
| Staffing/Skills Required: (# and type of positions; workmonth cost has been incorporated in workload measure estimates) | Three new Fisheries positions | | | | | | | | | |

# E. Threatened and Endangered Species Program

The Endangered Species Act assigns the responsibility for managing Federally-listed threatened and endangered species to the Federal government. Federal agencies are directed to carry out programs which will bring threatened and endangered species' status and the ecosystems upon which they depend to a condition where listing is no longer warranted. BLM in California has a corresponding policy with regard to State-listed species, and also works to improve the status of candidate and sensitive species in order to eliminate the need to officially list these species.

Because threatened and endangered species comprise a significant part of the Bureau's fish and wildlife program in California, this document presents detailed discussions of individual aspects of the overall component, such as desert tortoise and San Joaquin Valley species, as well as a summary discussion of the overall component itself. This section also discusses special habitats/Natural Areas. These discussions include summaries of needs to effectively manage the program through the year 2000.

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Denver, CO 80225

## 1. THREATENED AND ENDANGERED SPECIES

### Issues

1. Impacts to both listed and candidate endangered and threatened species will increase over the next decade, making public land populations even more vital to the recovery of these species.

2. It is imperative that BLM increase its efforts to recover these species and to ensure that BLM authorized actions do not jeopardize these species or their habitats.

### Background

Escalating pressure from a number of sources, mostly related to California's burgeoning population, will result in more plant and animal species being listed as threatened and endangered, both by the Federal and State governments. More species will also be added to the candidate list. These pressures will be especially severe on private lands, where more and more native habitat will be converted for urban and agricultural use. Thus, populations of those species occurring on public lands (see Appendix E) managed by BLM will be even more important to future conservation and recovery.

Threatened and endangered species conservation is the overriding consideration in all BLM land management actions. Pro-active measures are necessary to recover both listed and candidate species. In addition, adequate evaluation of the effects of all other BLM actions on listed and candidate species are critical elements of conservation. Section 7 consultations with the U.S. Fish and Wildlife Service on listed species and informal consultations on candidate species represent one mechanism in this evaluation. It is BLM's responsibility, however, to identify impacts and avoid them whenever possible. When this is not possible it is BLM's responsibility (with the concurrence of the U.S. Fish and Wildlife Service) to require mitigation and compensation such that there is no jeopardy to the affected species.

Information on such factors as distribution, habitat requirements, and response to disturbance is lacking for many species, particularly candidate species. Inventories, studies, and research projects are necessary to fill these data gaps and allow managers to make more intelligent decisions.

Coordination with other agencies and groups is vital to the success of this program. Many strides have been achieved through past effective coordination with the U.S. Fish and Wildlife Service, the California Department of Fish and Game, and The Nature Conservancy, among many others. Many more steps remain to be taken. Support from those not directly involved in the program, including both the public and BLM personnel, is also crucial.

### Objectives

1. Ensure, by conducting necessary inventories, research, and studies, that BLM has the information required to conserve and recover the threatened, endangered, and candidate species on public lands. Manage this information through the use of a data base.

2. Through the planning process (including Resource Management Plans, Habitat Management Plans, Recovery Plans, and other plans as appropriate) identify actions and funding necessary to conserve and recover threatened, endangered, and candidate species on public lands.

3. Ensure that management actions necessary to conserve and recover threatened, endangered, and candidate species are implemented. Implement a system to track these actions.

4. Through the NEPA process evaluate effects of proposed actions on threatened, endangered, and candidate species and implement necessary mitigation and compensation measures to ensure the actions will not jeopardize the species. Ensure followup monitoring of mitigation measures.

5. Implement a system to monitor and evaluate population trends and habitat conditions for threatened, endangered, and candidate species.

6. Increase the awareness of threatened, endangered, and candidate species needs and management to gain the support of both the public and BLM personnel.

7. Expand cooperative efforts with other agencies and groups.

8. Ensure there are adequate personnel with the appropriate qualifications to carry out the threatened, endangered, and candidate species program.

## Financial Planning Sheet

## THREATENED & ENDANGERED SPECIES SUMMARY*

| Objective #: E.1.-all Workload Measures | FISCAL YEARS | | | | | | | | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1990-1991 | | 1992-1993 | | 1994-1995 | | 1996-2000 | | | |
| | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) |
| 1. Inventory: 000s Acres | 2244 | 1374 | 4446 | 2527 | 4094 | 2485 | 2814 | 2522 | 13598 | 8908 |
| 2. Monitoring: # Plans | 73 | 849 | 86 | 1412 | 108 | 1679 | 220 | 4336 | 487 | 8276 |
| 3. Project Develop: # Projects | 31 | 286 | 61 | 560 | 68 | 1374 | 114 | 1452 | 274 | 3672 |
| 4. Reintroductions: # by Species | 6 | 70 | 9 | 210 | 7 | 204 | 13 | 237 | 34 | 721 |
| 5. Plans to be Developed: # HMPs, ACECs, CMAs, CRMPs | 43 | 298 | 66 | 439 | 63 | 331 | 99 | 539 | 271 | 1607 |
| 6. Coop. Agreements/ MOUs: # Needed: | 17 | 35 | 8 | 26 | 8 | 29 | 19 | 66 | 51 | 156 |
| 7. Maintenance: # projects maintained | 21 | 165 | 209 | 264 | 220 | 303 | 447 | 684 | 897 | 1416 |
| 8. Recovery Plans: # to be Developed | 4 | 50 | 4 | 20 | 4 | 20 | 10 | 50 | 22 | 140 |
| 9. Acquisition and Exchange: # Projects | 37 | 14333 | 45 | 16858 | 45 | 18338 | 134 | 45134 | 262 | 94663 |
| 10. Research | 36 | 3025 | 44 | 5238 | 40 | 6006 | 56 | 6853 | 176 | 21122 |
| Total Cost for Objective | | 20485 | | 27554 | | 30769 | | 61873 | | 140681 |
| Staffing/Skills Required: (# and type of positions; workmonth cost has been incorporated in workload measure estimates) | Six additional Wildlife Biologists<br>Eighteen additional Botanists<br>Two additional Realty Specialists<br>One additional Biostatistician<br>One additional Contract/Procurement Specialist<br>* includes desert tortoise, San Joaquin species, northern spotted owl, bald eagle, peregrine falcon, special status plants, special habitats, plus additional program needs. | | | | | | | | | |

## a. *Desert Tortoise*

### Issue

1. The BLM, as the Federal agency administering the majority of Federal land containing populations of the federally-listed endangered desert tortoise, must assume a "lead" role in recovering this species to a point where Federal listing is no longer required.

### Background

A significant proportion of desert tortoise populations and habitats in the United States are on public lands administered by the BLM. An overall management strategy for the species, the Rangewide Plan, was developed on a National level in 1988. The strategy and implementation plan for California, Recommendations for Management of the Desert Tortoise in the California Desert (called the Workgroup Report), was also produced in 1988. The latter document gives specific management direction, and supplements the framework provided by the 1980 California Desert Conservation Area Plan.

The BLM has undertaken a variety of management actions for the benefit of desert tortoise. These activities include preparation of management plans for the species; participation in interagency groups managing the species and its habitats; collection of data addressing population status and trends; establishment of livestock turnout limits to maintain ephemeral forage during spring months; consolidation of crucial habitats by both direct purchase and exchange; contribution of funds and staff time towards disease-related research; development of measures to mitigate and offset direct and indirect effects to tortoise habitats; and implementation of selected raven control in the California deserts to lower predation rates on juvenile desert tortoises.

Desert tortoise populations range-wide have continued to decline in recent years. These declines have resulted in the recent Federal listing of the species throughout the majority of its geographic range in the United States. Increased management emphasis by several State and Federal agencies is needed to implement program actions, develop additional management plans, and coordinate with other involved agencies and the general public.

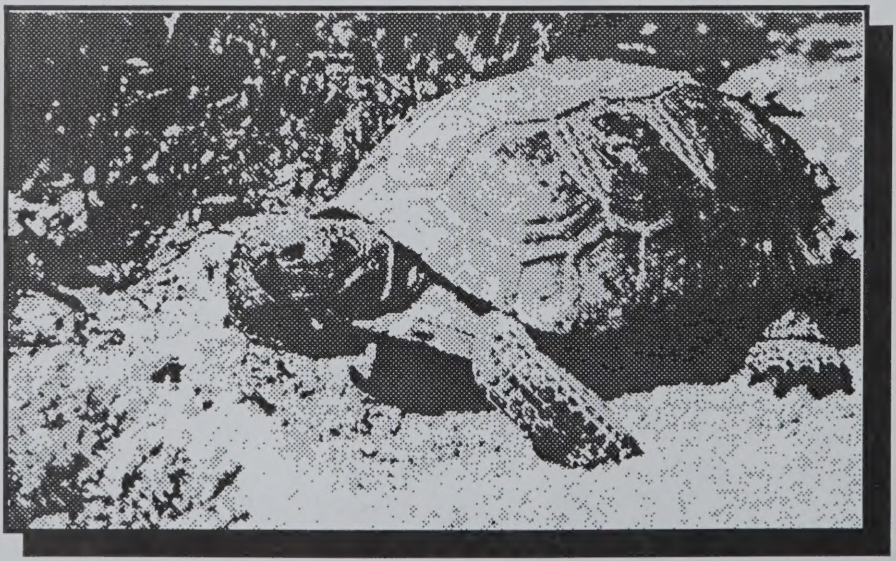
### Objectives

1. Maintain close coordination among agencies, groups, and the general public.

2. Implement management strategies outlined in the 1988 Rangewide Plan and California Workgroup Report.

3. Manage tortoise populations and habitats in a manner consistent with the overall objective of recovering the species by: (a) maintaining viable, stable populations; (b) eliminating non-natural mortality; (c) consolidating crucial tortoise habitat areas; (d) conducting research where data gaps exist; (e) implementing a monitoring program to determine success; and (f) modifying actions as necessary to protect the species.

4. Participate in interagency efforts to recover the species to a point where Federal listing is no longer necessary.



# Financial Planning Sheet

**DESERT TORTOISE**

FISCAL YEARS

| Objective #: E.1.a.-all<br>Workload Measures | 1990-1991 UNITS | 1990-1991 COST ($000) | 1992-1993 UNITS | 1992-1993 COST ($000) | 1994-1995 UNITS | 1994-1995 COST ($000) | 1996-2000 UNITS | 1996-2000 COST ($000) | TOTAL UNITS | TOTAL COST ($000) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. Inventory: 000s Acres | 322 | 230 | 404 | 650 | 404 | 650 | 602 | 500 | 1732 | 2030 |
| 2. Monitoring: # Plans | | | 10 | 450 | 10 | 450 | 20 | 1130 | 40 | 2030 |
| 3. Project Develop: # Projects | 1 | 12 | 2 | 60 | 6 | 800 | 3 | 400 | 12 | 1272 |
| 4. Reintroductions: # by Species | | | 2 | 100 | 2 | 100 | 5 | 100 | 9 | 300 |
| 5. Plans to be Developed: # HMPs, ACECs, CMAs, CRMPs | 8 | 80 | 8 | 120 | | | | | 16 | 200 |
| 6. Coop. Agreements/ MOUs: # Needed: | 8 | 10 | | | | | | | 8 | 10 |
| 7. Maintenance: # projects maintained | | | 150 | 50 | 150 | 50 | 300 | 100 | 600 | 200 |
| 8. Recovery Plans: # to be Developed | 2 | 40 | | | | | | | 2 | 40 |
| 9. Acquisition and Exchange: # Projects | 8 | 1500 | 8 | 1500 | 8 | 1500 | 32 | 3750 | 56 | 8250 |
| 10. Research | 23 | 2540 | 27 | 4492 | 19 | 5100 | 22 | 5650 | 91 | 16782 |
| Total Cost for Objective | | 4412 | | 7422 | | 8650 | | 11630 | | 31114 |
| Staffing/Skills Required: (# and type of positions; workmonth cost has been incorporated in workload measure estimates) | 2 additional Wildlife Bioligists | | | | | | | | | |

## *b. San Joaquin Valley Endangered Species Conservation*

### Issue

1. The Bureau is mandated by the Endangered Species Act (ESA) to conserve endangered and threatened species to utilize the Bureau's authority to conserve the ecosystems upon which endangered and threatened species depend, and to provide a program for the conservation of such species.

2. Bureau lands within the San Joaquin Valley are considered to be key to the conservation and recovery of several Federal- and State- listed and proposed species, as well as to preventing the listing of numerous candidate species.

3. By cooperating with other Federal, State, and local governments as well as conservation and special interest groups in the Valley, the Bureau has the ability to make a significant contribution toward the conservation of threatened and endangered species and the ecosystems upon which they depend.

### Background

Prior to the mid-nineteenth century settlement of California's San Joaquin Valley, over 260,000 acres of alkali sink and 800,000 acres of saltbush scrub communities covered portions of the Valley floor. Today only 20% of the original alkali sink and 4.5% of the original saltbush scrub habitats remain. Intensive agriculture, oil and gas development, urbanization, and other land uses have replaced over 90% of the Valley's wildlands. This conversion prompted the U.S. Fish and Wildlife Service and the California Fish and Game Commission to list several plant and animal species as threatened or endangered. Species including the San Joaquin kit fox, blunt-nosed leopard lizard, giant kangaroo rat, Tipton kangaroo rat, San Joaquin antelope squirrel, California condor, California jewelflower, San Joaquin woolythreads, Hoover's woollystar, Bakersfield cactus and Kern mallow are listed species that are found in remaining Valley habitats. Conservation efforts to protect and acquire the remaining Valley wildlands have been launched by Federal, State, county and local governments, private conservation organizations, and industry. The Bureau of Land Management administers significant acreage of the remaining habitats, and is in the forefront of San Joaquin Valley endangered species conservation through efforts such as the creation of the 180,000 acre Carrizo Plain Natural Area.

### Objectives

1. Continue to participate in the preparation of San Joaquin Valley species Recovery Plans.

2. Continue to participate in the preparation of Habitat Conservation Plans, County Planning Elements, Conservation Easements, etc., to coordinate T&E conservation efforts.

3. Continue to implement Recovery Plan items as applicable to Bureau lands.

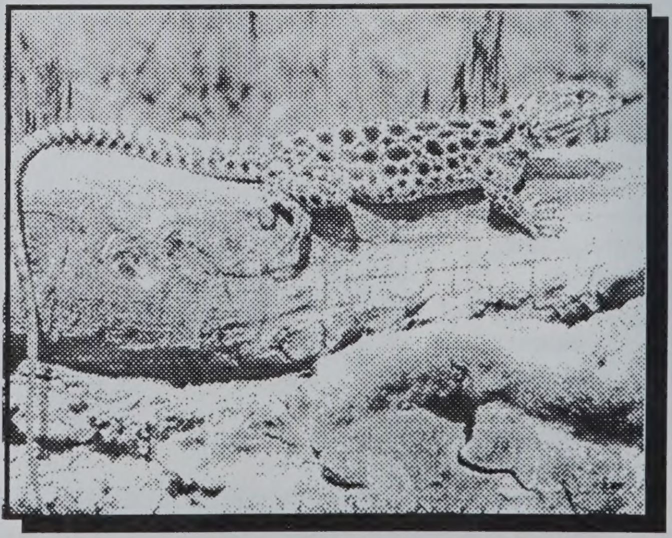
4. Cooperate with Federal, State and local agencies and private conservation organizations to augment existing Bureau lands identified as potential reserves in recovery plans.

5. Continue to cooperate with The Nature Conservancy and the California Department of Fish and Game to acquire lands in the Carrizo Plain Natural Area and to implement the CPNA management plan.

6. Inventory and monitor Bureau lands to ensure that the necessary quantity and quality of habitat is maintained to support viable populations.

7. Support studies and research to evaluate special status plant and animal species demographics, habitat requirements, habitat condition and trend and the effectiveness of management actions.

8. Prepare activity plans to determine special status species objectives for specific geographic areas and to direct subsequent management activities to meet these objectives.



| | Financial Planning Sheet | | | | | | | | SAN JOAQUIN VALLEY/ CARRIZO PLAIN ENDANGERED SPECIES | |
|---|---|---|---|---|---|---|---|---|---|---|
| Objective #: `E.1.b.-all` | FISCAL YEARS | | | | | | | | | |
| | 1990-1991 | | 1992-1993 | | 1994-1995 | | 1996-2000 | | TOTAL | |
| Workload Measures | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) |
| 1. Inventory: 000s Acres | 70 | 30 | 90 | 40 | 70 | 40 | 200 | 100 | 430 | 210 |
| 2. Monitoring: # Plans | 3 | 90 | 6 | 180 | 8 | 190 | 16 | 490 | 33 | 950 |
| 3. Project Develop: # Projects | 9 | 70 | 16 | 120 | 18 | 120 | 35 | 300 | 78 | 610 |
| 4. Reintroductions: # by Species | 2 | 4 | 2 | 6 | | | | | 4 | 10 |
| 5. Plans to be Developed: # HMPs, ACECs, CMAs, CRMPs | 4 | 23 | 10 | 40 | 10 | 40 | 20 | 100 | 44 | 203 |
| 6. Coop. Agreements/ MOUs: # Needed: | 2 | 6 | 2 | 6 | 2 | 6 | 5 | 15 | 11 | 33 |
| 7. Maintenance: # projects maintained | 10 | 110 | 20 | 110 | 20 | 110 | 50 | 300 | 100 | 630 |
| 8. Recovery Plans: # to be Developed | 2 | 10 | 4 | 20 | 4 | 20 | 10 | 50 | 20 | 100 |
| 9. Acquisition and Exchange: # Projects | 12 | 6690 | 14 | 7805 | 14 | 9131 | 40 | 26091 | 80 | 49717 |
| 10. Research | 1 | 20 | 2 | 40 | 4 | 80 | 10 | 200 | 17 | 340 |
| **Total Cost for Objective** | | 7053 | | 8367 | | 9737 | | 27646 | | 52803 |
| Staffing/Skills Required: (# and type of positions; workmonth cost has been incorporated in workload measure estimates) | One additional Realty Specialist<br>One additional Wildlife Biologist<br>One additional Botanist | | | | | | | | | |

## c. *Northern Spotted Owl*

### Issues

1. Insufficient data exists to determine the cumulative effects of timber harvest on spotted owls, and whether some methods of timber harvest are beneficial.

2. There is a need to determine risks to regional spotted owl population viability due to current timber harvest in the face of incomplete information.

3. There is a need to minimize effects on other resources that result from protecting spotted owl habitat.

4. Disagreement exists about the habitat requirements of spotted owls.

5. There is a need to address management of old-growth forests distinct from the management of spotted owl habitat.

6. There is a need to maintaining current spotted owl inventory data for mature and old-growth forests.

7. There is a need to determine the distribution of critical habitat areas necessary to maintain viable populations of spotted owls.

8. There is a need to determine the effectiveness of mitigation measures designed to minimize adverse impacts to spotted owls.

9. The cumulative impact of timber harvesting on spotted owls must be evaluated.

### Background

On June 23, 1989, the Fish and Wildlife Service published in the Federal Register a proposal to list the northern spotted owl as threatened throughout its range. This means that BLM must now confer with FWS on all projects (i.e., timber sales) which may effect the northern spotted owl or its recovery.

Northern spotted owl habitat on BLM managed lands in California consists primarily of mature and old-growth forests within the Ukiah District. However, mature and old-growth forests are not always suitable spotted owl habitat.

Northern spotted owl inventory efforts in the Ukiah District have produced the locations of fourteen spotted owl pairs. Only one of these pairs has been found in a mature/old-growth forest stand larger than 300 acres. This forest stand is 1500 acres in size and is within the Honeydew Creek drainage in the King Range National Conservation Area. The entire 1500 acres of forest and 1500 acres of buffer area have been withdrawn to protect old-growth habitat. We have withdrawn several other areas in order to protect old-growth habitat including six Research Natural Areas/ Areas of Critical Environmental Concern. The place name and acreage of these areas are: Butte Creek (2500 acres), Lacks Creek (800 acres). Gilham Butte (2500 acres), Iaqua Buttes ( 1000 acres), Cedar Creek (800 acres), and Elder Creek (3600 acres). Total acreage of the above Research Natural Areas is 11,200. Through the establishment of Research Natural Areas and other types of withdrawals we have provided protection for twelve of the fourteen pair of spotted owls located on Ukiah District lands.

The Forest Service, U.S. Fish and Wildlife Service, and BLM have developed a process for technical assistance and Section 7 conference on northern spotted owls and their habitat. The agencies have begun this review process on individual projects.

### Objectives

1. Maintain current spotted owl inventory data for all projectsin mature and old-growth forest areas as well as other habitat types occupied by spotted owls.

2. Monitor the effects of BLM actions on spotted owls.

3. Develop in cooperation with other land managers and wildlife experts a northern spotted owl conservation plan.

## Financial Planning Sheet

**NORTHERN SPOTTED OWL**

| Objective #: E.1.c.-all Workload Measures | FISCAL YEARS | | | | | | | | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1990-1991 | | 1992-1993 | | 1994-1995 | | 1996-2000 | | | |
| | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) |
| 1. Inventory: 000s Acres | 20 | 37 | 20 | 43 | 20 | 51 | 80 | 238 | 140 | 369 |
| 2. Monitoring: # Plans | 1 | 120 | 1 | 130 | 1 | 150 | 4 | 730 | 7 | 1130 |
| 3. Project Develop: # Projects | | | | | | | | | | |
| 4. Reintroductions: # by Species | | | | | | | | | | |
| 5. Plans to be Developed: # HMPs, ACECs, CMAs, CRMPs | | | | | | | | | | |
| 6. Coop. Agreements/ MOUs: # Needed: | 2 | 4 | 2 | 5 | 2 | 5 | 8 | 25 | 14 | 39 |
| 7. Maintenance: # projects maintained | | | | | | | | | | |
| 8. Recovery Plans: # to be Developed | | | | | | | | | | |
| 9. Acquisition and Exchange: # Projects | | | | | | | | | | |
| 10. Research | | | | | | | | | | |
| Total Cost for Objective | | 161 | | 178 | | 206 | | 993 | | 1538 |
| Staffing/Skills Required: (# and type of positions; workmonth cost has been incorporated in workload measure estimates) | One additional Wildlife Biologist | | | | | | | | | |

# *d. Bald Eagle*

## Issue

1. There is a need for the Bureau to continue management and protection efforts for the endangered bald eagle and its habitats to ensure that recovery trends continue.

## Background

California supports both a resident bald eagle breeding population and a fall-winter population composed of northern migrants. Since 1973, when systematic inventories of bald eagles began, the number of confirmed breeding pairs has more than doubled and the species' breeding range has increased significantly. At present, California's breeding population consists of 80-90 eagle pairs distributed through 15 counties, mostly in the northern third of the state. The fall-winter population currently consists of well over 1,000 individuals distributed nearly statewide. Recent increases in the fall-winter population indicate that recovery is occurring on a regional level.

Recent recovery trends in bald eagle populations are related primarily to the banning of DDT in 1972. However, during the last 15 years, increased research, management, and protection of bald eagles and their habitats by Federal and State agencies and private organizations have also played a critical role. Since 1986, these efforts have been guided by the Pacific Bald Eagle Recovery Plan directed by the California Bald Eagle Recovery Team of which BLM is a member.

Lands administered by the Bureau in California currently support at least 9 breeding pairs of bald eagles and hundreds of winter migrants. In the latter case, two areas are particularly notable: Mt. Dome, in the Susanville District, and Cache Creek, in the Ukiah District. Over 250 eagles have been counted on a single night within a roosting area on Mt. Dome. The Cache Creek drainage, recently designated as an ACEC, supports as many as 60 eagles during peak winter concentrations. Identification and protection of suitable habitat on BLM lands, and identification and acquisition of occupied habitats or suitable, unoccupied habitats which are near but not currently on Bureau-administered lands will be important to the species' recovery.

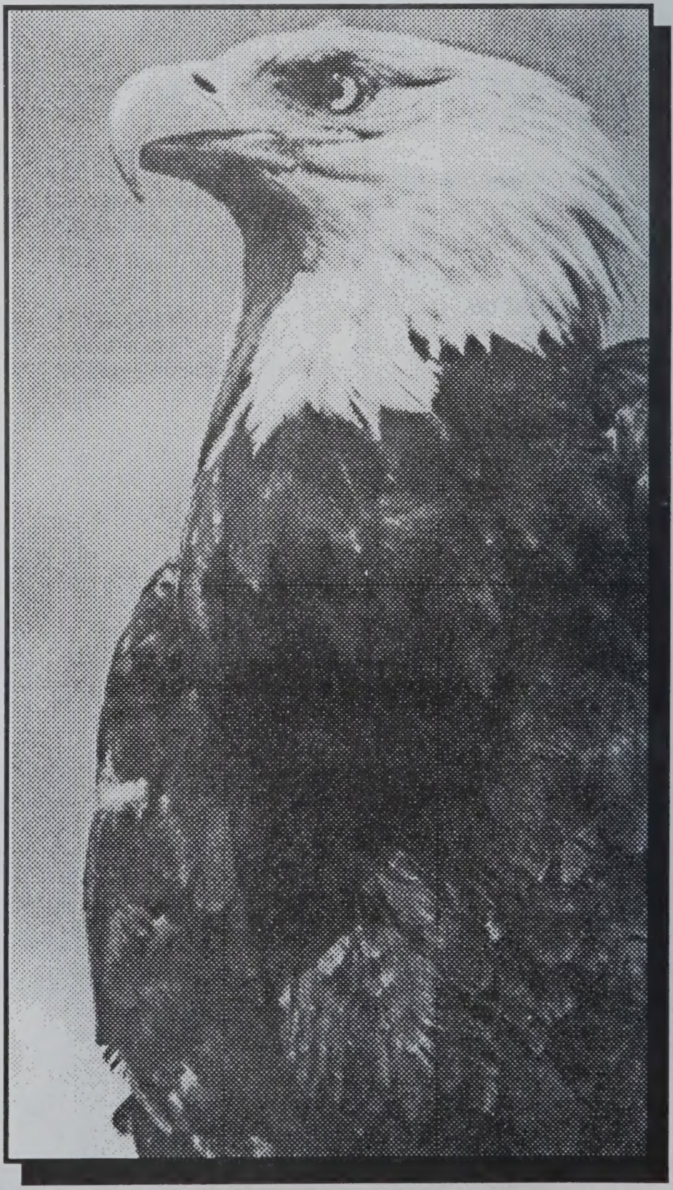
## Objectives

1. Maintain a high level of Bureau involvement in bald eagle research and management in California.

2. Continue to implement existing management plans for important bald eagle use areas on BLM lands and develop plans for areas for which none have been developed.

3. Increase efforts to inventory and protect suitable but unoccupied Bald Eagle habitats on BLM lands to ensure expansion habitat for recovery.

4. Increase land acquisition efforts.



## Financial Planning Sheet **BALD EAGLE**

| Objective<br>#: `E.1.d.-all`<br>Workload Measures | FISCAL YEARS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1990-1991 | | 1992-1993 | | 1994-1995 | | 1996-2000 | | TOTAL | |
| | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) |
| 1. Inventory: 000s Acres | 15 | 30 | 15 | 30 | 15 | 30 | 30 | 60 | 75 | 150 |
| 2. Monitoring: # Plans | 16 | 42 | 16 | 42 | 16 | 42 | 32 | 84 | 80 | 210 |
| 3. Project Develop: # Projects | | | 6 | 30 | 3 | 15 | | | 9 | 45 |
| 4. Reintroductions: # by Species | | | | | | | | | | |
| 5. Plans to be Developed: # HMPs, ACECs, CMAs, CRMPs | 3 | 30 | | | | | | | 3 | 30 |
| 6. Coop. Agreements/ MOUs: # Needed: | | | | | | | | | | |
| 7. Maintenance: # projects maintained | | | | | | | | | | |
| 8. Recovery Plans: # to be Developed | | | | | | | | | | |
| 9. Acquisition and Exchange: # Projects | 5 | 1400 | 5 | 1400 | 5 | 1400 | 12 | 2800 | 27 | 7000 |
| 10. Research | | | | | | | | | | |
| Total Cost for Objective | | 1502 | | 1502 | | 1487 | | 2944 | | 7435 |
| Staffing/Skills Required: (# and type of positions; workmonth cost has been incorporated in workload measure estimates) | | | | | | | | | | |

# e. Peregrine Falcon

## Issues

1. There is inadequate knowledge of the distribution of critical habitat areas necessary to maintain viable populations of peregrine falcons.

2. There is a need to maintain current peregrine falcon inventory data in order to assess population trends and determine possible future delisting of the species.

3. Peregrine falcon population viability is at risk due to non-protection status of crucial habitat areas in private ownership.

## Background

The Bureau of Land Management in California, in cooperation with several other agencies, has played a key role in peregrine falcon recovery efforts by ensuring compliance with the Endangered Species Act of 1973, continuing recovery efforts, and protecting peregrine habitats.

In 1979, the BLM's Ukiah District Office began helicopter and ground inventory and monitoring of the peregrine falcon breeding population throughout the District on public and private lands. The number of active nesting sites located and monitored has increased from 19 in 1980 to 64 in 1989, which represents over 70 percent of the state population.

Early in 1988 BLM, in a five-agency MOU signed by BLM, FWS, USFS, NPS, and CDFG, was given the lead for coordinating the monitoring of the annual reproduction of peregrine falcons in California. All agencies have worked cooperatively to secure the recovery of the peregrine falcon. The Santa Cruz Predatory Bird Research Group has also played an important role in the monitoring program, and has been the pivotal organization in population augmentation work.

## Objectives

1. Implement the Recovery Plan which calls for a minimum of 120 self-sustaining breeding pairs of peregrine falcons in California before the population can be considered for reclassification from endangered to threatened. The definition of self-sustaining is annual production of 1.5 young per breeding pair for at least five years.

2. Meet prescribed quotas for all designated recovery zones within the state as per the recovery plan

3. Implement the five-agency MOU which requires that an intensive, standardized population monitoring program be conducted for a five year period, ending in 1992, for the purpose of assessing the extent of recovery of the peregrine falcon breeding population in California. In 1992, BLM will submit a summary report to the FWS, which will provide the necessary information for re-classification consideration.

4. Continue population monitoring beyond 1992 to assure that the peregrine falcon breeding population in California can sustain itself.

5. Continue to research methods and improve existing methods of reintroducing peregrine falcons into the wild.

6. Actively pursue the acquisition of peregrine falcon nesting sites through exchange, donation or purchase, especially in areas adjacent to Bureau managed lands.

## Financial Planning Sheet

**PEREGRINE FALCON**

| Objective #: E.1.e.-all Workload Measures | FISCAL YEARS 1990-1991 UNITS | COST ($000) | 1992-1993 UNITS | COST ($000) | 1994-1995 UNITS | COST ($000) | 1996-2000 UNITS | COST ($000) | TOTAL UNITS | COST ($000) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. Inventory: 000s Acres | 10 | 14 | 10 | 15 | 10 | 17 | 40 | 70 | 70 | 116 |
| 2. Monitoring: # Plans | 2 | 48 | 2 | 49 | 2 | 58 | 4 | 234 | 10 | 389 |
| 3. Project Develop: # Projects | 1 | 10 | 1 | 11 | 1 | 12 | 2 | 25 | 5 | 58 |
| 4. Reintroductions: # by Species | 1 | 10 | 1 | 10 | 1 | 10 | 4 | 40 | 7 | 70 |
| 5. Plans to be Developed: # HMPs, ACECs, CMAs, CRMPs | | | | | | | | | | |
| 6. Coop. Agreements/ MOUs: # Needed: | 1 | 4 | 1 | 4 | 1 | 4 | 4 | 20 | 7 | 32 |
| 7. Maintenance: # projects maintained | | | | | | | | | | |
| 8. Recovery Plans: # to be Developed | | | | | | | | | | |
| 9. Acquisition and Exchange: # Projects | 1 | 120 | 2 | 140 | 2 | 160 | 20 | 400 | 25 | 820 |
| 10. Research | | | | | | | | | | |
| Total Cost for Objective | | 206 | | 229 | | 261 | | 789 | | 1485 |
| Staffing/Skills Required: (# and type of positions; workmonth cost has been incorporated in workload measure estimates) | One additional Wildlife Biologist | | | | | | | | | |

# *f. Special Status Plants*

## Issue

1. Because of the tremendous number of special status plants present on public lands in California, even basic information on distribution and habitat requirements is lacking.
2. Conservation and recovery of this large number of special status plant species requires a much greater emphasis on their management.

### Background

California has more special status plant species (including Federal and State listed, Federal candidate, and BLM sensitive plants) than any other state in the continental United States. A great number of these plants are known or highly suspected to occur on public lands managed by BLM. Currently, 154 special status plant species (including eight Federally listed and five Federally proposed plants) are known to occur on public lands in California. Another 155 special status plants are highly suspected to occur on public lands but have not yet been documented (the fragmented nature of some of the public lands in the State makes this determination difficult).

Most of the special status plant species on public lands in California are Federal candidates for listing. Most of these candidates warrant listing, but because of the lengthy formal designation process they have not yet been listed. It is critical, therefore, that BLM manage for the recovery of these species and, to the extent possible, eliminate the need for their listing. Objectives for this program mirror those described for threatened and endangered species in general, but the following points must be stressed.

Because of the tremendous number of special status plants present on public lands in California, even basic information on distribution is lacking for most of these plants. Additional inventory efforts are therefore vitally needed. Studies and research are also extremely important, especially for those species that have populations with the potential for being impacted by private and Federal actions.

Although BLM in California has increased its botanical capability in recent years, there are still far too few BLM personnel with the expertise and time to devote to this program. One of the most important objectives for the next decade is to ensure BLM in California has sufficient personnel to effectively manage this resource.

## Objectives

1. Ensure, by conducting necessary inventories, research, and studies, that BLM has the information required to conserve and recover the special status plant species on the public lands. Give special attention to conducting **complete** inventories prior to development of Resource Management Plans. Manage this information through the use of a data base.
2. Through the planning process (including Resource Management Plans, Habitat Management Plans, Recovery Plans, and other plans as appropriate) identify actions and funding necessary to conserve and recover special status plant species on the public lands.
3. Ensure that management actions necessary to conserve and recover special status plant species are implemented. Implement a system to track these actions.
4. Through the NEPA process evaluate effects of proposed actions on special status plant species and implement necessary mitigation and compensation measures to ensure the actions will not jeopardize these species. Schedule necessary surveys at the appropriate time of year to locate and identify special status plants.
5. Implement a system to monitor and evaluate population trends and habitat conditions for special status plant species.
6. Increase the awareness of special status plant species needs and management to gain the support of both the public and BLM personnel.
7. Expand cooperative efforts with other agencies and groups.
8. Ensure there are adequate personnel with the appropriate qualifications to carry out the special status plant species program. The long-term objective is to have a botanist (or other qualified person) in each Resource Area.

## Financial Planning Sheet

**SPECIAL STATUS PLANTS**

| Objective #: `E.1.f.-all` Workload Measures | FISCAL YEARS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1990-1991 | | 1992-1993 | | 1994-1995 | | 1996-2000 | | TOTAL | |
| | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) |
| 1. Inventory: 000s Acres | 1000 | 800 | 1500 | 1200 | 1500 | 1200 | 1600 | 1300 | 5600 | 4500 |
| 2. Monitoring: # Plans | 18 | 270 | 12 | 180 | 20 | 300 | 50 | 750 | 100 | 1500 |
| 3. Project Develop: # Projects | 8 | 100 | 12 | 150 | 12 | 150 | 18 | 220 | 50 | 620 |
| 4. Reintroductions: # by Species | 2 | 50 | 3 | 75 | 3 | 75 | 3 | 75 | 11 | 275 |
| 5. Plans to be Developed: # HMPs, ACECs, CMAs, CRMPs | 12 | 90 | 20 | 150 | 20 | 150 | 30 | 230 | 82 | 620 |
| 6. Coop. Agreements/ MOUs: # Needed: | | | | | | | | | | |
| 7. Maintenance: # projects maintained | 4 | 20 | 6 | 30 | 8 | 40 | 12 | 60 | 30 | 150 |
| 8. Recovery Plans: # to be Developed | | | | | | | | | | |
| 9. Acquisition and Exchange: | 3 | 560 | 5 | 840 | 5 | 840 | 7 | 1470 | 20 | 3710 |
| 10. Research Studies/Researh #Studies | 5 | 70 | 6 | 80 | 7 | 100 | 12 | 170 | 30 | 420 |
| Total Cost for Objective | | 1960 | | 2705 | | 2855 | | 4275 | | 11795 |
| Staffing/Skills Required: (# and type of positions; workmonth cost has been incorporated in workload measure estimates) | Twelve additional Botanists(includes Botanist for San Joaquin/Carrizo Plain) | | | | | | | | | |

## g. *Special Habitats/Natural Areas*

### Issues

1. Increasingly severe pressures from a rapidly growing populace will continue to adversely affect California's remarkable biological diversity.
2. Cooperative protection and management of special habitats, both on public and private lands, will be necessary to preserve a significant amount of this biological diversity.

### Background

Because of its size, position, and topography, California is the most biologically diverse state in the union in many important ways. For example: California has about 8,000 species, varieties, and subspecies of plants, far more than any other state in the union; there are more species of conifers (52) in California than in any other state; the California Floristic Province (that part of California west of the Sierra Nevada-Cascade crest) has more kinds of vascular plants than the central and northeastern United States and adjacent Canada combined, even though the latter area is 10 times larger; almost half of the plant species of the California Floristic Province are endemic (that is, they occur nowhere else in the world).

About 375 different plant communities have been described in California. That number is expected to grow exponentially as more research is conducted on plant community relationships (research on plant communities is in its infancy in California). Some estimate several thousand different California communities.

This incredible biological diversity is threatened by a fast growing population and the concomitant spread of urban and agricultural conversions of wildlands. It is not surprising, therefore, that there is a great need to identify and preserve California's special habitats (special habitats include rare, vulnerable, and representative habitats, plant communities and ecosystems).

Affording protection and management to special habitats requires a coordinated commitment by BLM and other agencies and groups. The Interagency Natural Areas Coordinating Committee (INACC) consists of 10 State and Federal agencies and The Nature Conservancy. Its role is to identify those special habitats in need of designation and the best examples of each.

A greatly accelerated effort by field offices is necessary to designate and manage special habitats before they are lost forever. Accordingly, objectives are to continue participation in the INACC and hold a series of regional workshops, involving the local offices of BLM and the other INACC agencies, to identify and designate worthy areas as ACECs (on public lands). Management plans and necessary actions must then be implemented expeditiously.

### Objectives

1. Identify, through inventory and interagency coordination, those special habitats on public lands necessary to fill gaps in the State's system of natural areas.
2. Through the planning process designate these special habitats as ACECs and develop ACEC plans for each.
3. Implement the management actions prescribed through the ACEC plans.
4. Implement a system to monitor and evaluate whether objectives for special habitats are being met.
5. Increase the awareness of special habitat needs and management to gain the support of both the public and BLM personnel.
6. Ensure there are adequate personnel with the appropriate qualifications to properly identify and manage special habitats.

## Financial Planning Sheet SPECIAL HABITATS *

| Objective<br>#: E.1.g.-all<br>Workload Measures | FISCAL YEARS<br>1990-1991<br>UNITS | <br><br>COST ($000) | <br>1992-1993<br>UNITS | <br><br>COST ($000) | <br>1994-1995<br>UNITS | <br><br>COST ($000) | <br>1996-2000<br>UNITS | <br><br>COST ($000) | <br>TOTAL<br>UNITS | <br><br>COST ($000) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. Inventory: 000s Acres | 600 | 100 | 2000 | 310 | 1700 | 260 | 0 | 0 | 4300 | 670 |
| 2. Monitoring: # Plans | 20 | 190 | 25 | 240 | 35 | 320 | 50 | 450 | 130 | 1200 |
| 3. Project Develop: # Projects | 5 | 60 | 10 | 120 | 10 | 120 | 26 | 310 | 51 | 610 |
| 4. Reintroductions: # by Species | | | | | | | | | | |
| 5. Plans to be Developed: # HMPs, ACECs, CMAs, CRMPs | 10 | 40 | 20 | 80 | 25 | 100 | 40 | 160 | 95 | 380 |
| 6. Coop. Agreements/ MOUs: # Needed: | | | | | | | | | | |
| 7. Maintenance: # projects maintained | 5 | 20 | 10 | 40 | 10 | 40 | 20 | 80 | 45 | 180 |
| 8. Recovery Plans: # to be Developed | | | | | | | | | | |
| 9. Acquisition and Exchange: # Projects | 4 | 1760 | 6 | 2640 | 6 | 2640 | 8 | 3520 | 24 | 10560 |
| 10. Research | 4 | 120 | 5 | 150 | 6 | 180 | 7 | 210 | 22 | 660 |
| Total Cost for Objective | | 2290 | | 3580 | | 3660 | | 4730 | | 14260 |
| Staffing/Skills Required: (# and type of positions; workmonth cost has been incorporated in workload measure estimates) | * includes old-growth reserves and other program needs. | | | | | | | | | |

# 1) Old-growth Forest Research Natural Areas/Areas of Critical Environmental Concern

## Issue

1. There is insufficient knowledge and development of management procedures for protecting the natural ecological balance which the Old-Growth Forest Research Natural Areas are intended to exemplify.

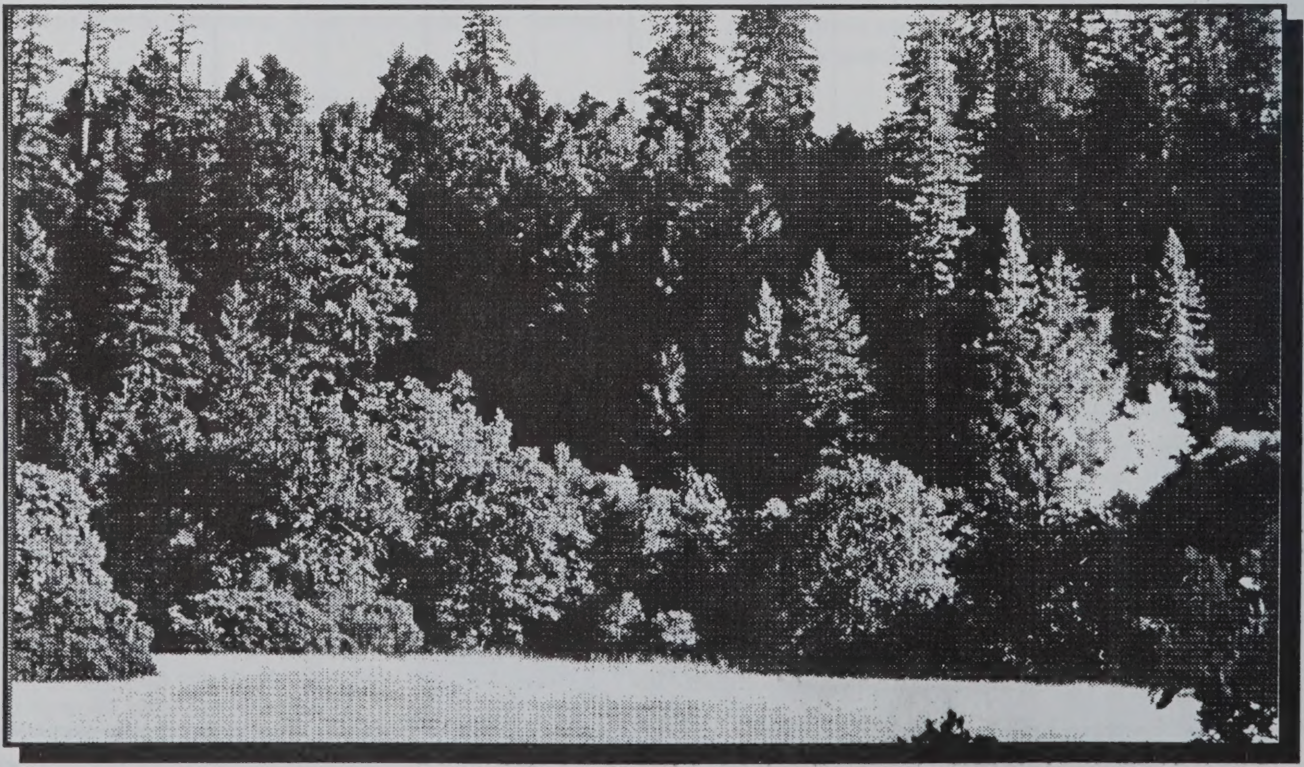
## Background

In 1981, the Ukiah District proposed an Old-Growth Forest Reserve System. This reserve system was conceived to provide long term protection for the resources contained within the units for the purpose of promoting regional biological diversity, conserving plant and animal genetic stock, preserving sensitive or scarce organisms, and providing opportunities for scientific research. Fifteen areas were studied to determine their suitability as old-growth reserves. As a result of written input from the public concerned with old-growth forest values, recommendations from the Ukiah District Advisory Council and additional input solicited from an old-growth forest study group, five areas were given old-growth forest reserve status and designated as Research Natural Areas/Areas of Critical Environmental Concern in 1989.

These areas include: Butte Creek (2500 acres), Lacks Creek (800 acres), Gilham Butte (2500 acres), Iagua Buttes (1000 acres), Cedar Creek (800 acres) and Elder Creek (3600 acres). Total acreage designated Old-growth Forest Research Natural Area is 11,200 acres.

## Objectives

1. Protect the Old-Growth Research Natural Areas from any influence that could alter or disrupt the Area's intrinsic values or the natural ecological balance which the Areas areintended to exemplify.
2. Preserve the full range of genetic and behavioral diversity for old-growth associated plants and animals and specialstatus species that currently reside within the Old-Growth Research Natural Areas, in so far as natural processes allow.
3. Provide research and higher education opportunities for scientists and teachers in the observation, study and monitoring of the Old-Growth Research Natural Areas.
4. Allow natural physical and biological processes to prevail; however, deliberate actions may be carried out to protect or increase the amount of old-growth habitat or for research or educational purposes in the Research Natural Areas, in so far as actions do not conflict with the other objectives listed above.



## Financial Planning Sheet

**OLD-GROWTH FOREST RESEARCH NATURAL AREAS**

| Objective #: E.1.g.1)-all<br>Workload Measures | FISCAL YEARS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1990-1991 | | 1992-1993 | | 1994-1995 | | 1996-2000 | | TOTAL | |
| | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) |
| 1. Inventory: 000s Acres | 3 | 8 | 3 | 9 | 3 | 11 | 6 | 25 | 15 | 53 |
| 2. Monitoring: # Plans | 6 | 12 | 6 | 13 | 6 | 16 | 24 | 74 | 42 | 115 |
| 3. Project Develop: # Projects | 4 | 8 | 8 | 18 | 12 | 32 | 20 | 65 | 44 | 123 |
| 4. Reintroductions: # by Species | | | | | | | | | | |
| 5. Plans to be Developed: # HMPs, ACECs, CMAs, CRMPs | 2 | 8 | 2 | 9 | 2 | 11 | | | 6 | 28 |
| 6. Coop. Agreements/ MOUs: # Needed: | 2 | 8 | 2 | 9 | 2 | 11 | | | 6 | 28 |
| 7. Maintenance: # projects maintained | | | 4 | 10 | 12 | 35 | 24 | 82 | 40 | 127 |
| 8. Recovery Plans: # to be Developed | | | | | | | | | | |
| 9. Acquisition and Exchange: # Projects | 1 | 1000 | 1 | 1000 | 1 | 1000 | 3 | 3000 | 6 | 6000 |
| 10. Research | | | | | | | | | | |
| **Total Cost for Objective** | | 1044 | | 1068 | | 1116 | | 3246 | | 6474 |
| Staffing/Skills Required: (# and type of positions; workmonth cost has been incorporated in workload measure estimates) | | | | | | | | | | |

# F. Outreach Programs

Outreach programs are essential to maintaining and increasing public awarness and support of the Bureau's Fish and Wildlife Program in California. Because of the continually increasing pressure on public land resources in California due to a burgeoning population and its needs, it is increasingly critical that BLM effectively convey information about the fish and wildlife habitat values present on public lands, as well as effectively enforcing laws and regulations designed to protect these values. This component presents discussions of outreach program needs in California through the year 2000.

Desert Tortoise
NATURAL AREA
TO PROTECT NATURAL VALUES

John Gerlach - Nature Photography

# 1. PUBLIC OUTREACH

## Issue

1. Public information and education programs are key elements in obtaining public support of BLM management decisions and programs.

## Background

Visitor use information collected since 1968 indicates that annual visitation to public lands has nearly tripled to 56 million visits. A primary concern in managing this burgeoning demand for recreational opportunities on public lands are the impacts, whether direct or indirect, to wildlife and wildlife habitat such use precipitates.

Hunting, fishing, photography and wildlife observation are recreational uses traditionally associated with wildlife and habitat management. Wildlife may also be impacted, however, by recreational activities that alter wildlife use patterns or impact habitat in a less direct manner. OHV use, increased human activity levels and noise are examples of such indirect impacts.

## Objectives

1. Actively pursue the implementation of an on-the-ground management presence and a resource monitoring program that begins with the highest priority areas (e.g., wildlife habitat areas, wildlife ACECs and other significant wildlife management areas) to assure that basic wildlife resources are properly protected as directed in our land use planning documents and legislative mandates.

2. Establish optimum visitor use carrying capacity levels, using a technique such as Limits of Acceptable Change (LAC), in all areas where visitor use has reached, or could reach in the foreseeable future, a level that could adversely impact significant wildlife values and/or the quality of visitor experiences.

3. Continually assess visitor use trends, new recreation technologies, and public attitudes in order to be aware of how use will/may affect wildlife resources. Changes in recreation opportunities provided can be made only after an assessment of impacts to fish and wildlife.

4. Expand our efforts to give the public an awareness and understanding of, and an appreciation for, wildlife resources. This will include the development of a prioritized schedule for the production of specific, suitable information about wildlife and habitat via signs, brochures, maps, and quality public contact on-the-ground.

5. Use visitor information and interpretation as a primary tool to protect sensitive wildlife and habitat resources, especially as prescribed in site-specific management documents and decisions.

## Financial Planning Sheet

**OUTREACH PROGRAM**

| Objective #: F.1.-all<br>Workload Measures | FISCAL YEARS<br>1990-1991 |  | 1992-1993 |  | 1994-1995 |  | 1996-2000 |  | TOTAL |  |
|---|---|---|---|---|---|---|---|---|---|---|
|  | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) |
| 1. Inventory: 000s Acres |  |  |  |  |  |  |  |  |  |  |
| 2. Monitoring: # Plans | 1 | 100 | 2 | 200 | 2 | 200 | 4 | 400 | 9 | 900 |
| 3. Project Develop: # Projects | 10 | 100 | 25 | 250 | 25 | 250 | 40 | 400 | 100 | 1000 |
| 4. Reintroductions: # by Species |  |  |  |  |  |  |  |  |  |  |
| 5. Plans to be Developed: # HMPs, ACECs, CMAs, CRMPs |  |  |  |  |  |  |  |  |  |  |
| 6. Coop. Agreements/ MOUs: # Needed: |  |  |  |  |  |  |  |  |  |  |
| 7. Maintenance: # projects maintained |  |  |  |  |  |  |  |  |  |  |
| 8. Recovery Plans: # to be Developed |  |  |  |  |  |  |  |  |  |  |
| 9. Acquisition and Exchange: # Projects |  |  |  |  |  |  |  |  |  |  |
| 10. Research |  |  |  |  |  |  |  |  |  |  |
| 11. Public Outreach: # of Documents | 50 | 250 | 50 | 250 | 50 | 250 | 200 | 1000 | 350 | 1750 |
| Total Cost for Objective |  | 450 |  | 700 |  | 700 |  | 1800 |  | 3650 |
| Staffing/Skills Required: (# and type of positions; workmonth cost has been incorporated in workload measure estimates) | Four additional Public Affairs Specialists/Visitor Services Specialists |  |  |  |  |  |  |  |  |  |

## 2. ROLE OF THE BLM RANGER IN THE WILDLIFE PROGRAM

### Issue

1. Increased use of public lands in California by the year 2000 will require more intensive management and increased on-the-ground presence to protect fish and wildlife resources.

2. A significantly increased field presence will be necessary to increase public awareness of sensitive fish and wildlife resources.

### Background

BLM's uniformed ranger force enforces Federal laws and regulations relating to public land resources, and provides public awareness, management assistance, and resource protection. Statewide in California, there are currently 55 rangers. The ranger is a fully trained professional in both law enforcement and in natural or social science whose responsibilities include protection of the public land resources through the enforcement of applicable laws and regulations, and educating the users about the resource values. Rangers are also responsible for providing resources program assistance through activities such as conducting and/or participating in resource inventories and monitoring either individually or as part of a team. Rangers may also provide input to the development of Habitat Management Plans.

In the past several years, as the ranger program has expanded in California, individual rangers have been assigned to special areas such as the Carrizo Plain Natural Area, Cache Creek Natural Area, Desert Tortoise Natural Area, and Coachella Valley Fringe-toed Lizard Preserve to increase the on-the-ground presence and law enforcement efforts in areas where critical wildlife resources have been identified. The priority of all ranger enforcement activities is the protection of public land resources, including wildlife, that have been identified through the planning process.

### Objectives

1. Seek additional law enforcement capability and authority to increase the effectiveness of resource protection efforts through additional training.

2. Increase, as appropriate, the on-the-ground presence of a professional ranger force to increase resource protection efforts in areas where significant wildlife values have been identified through the planning system.

3. Increase the role of the ranger force in resource monitoring programs to assure wildlife values are properly protected as directed by legislative mandates and land use planning documents.

4. Continue to use the knowledge gained by the rangers from field contacts and observations to continually assess visitor use trends and public attitudes so that we remain constantly aware of how use will or may affect wildlife resources.

# Financial Planning Sheet

**RANGERS**

| Objective #: F.2.-all<br>Workload Measures | FISCAL YEARS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1990-1991 | | 1992-1993 | | 1994-1995 | | 1996-2000 | | TOTAL | |
| | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) | UNITS | COST ($000) |
| 1. Inventory: 000s Acres | | | | | | | | | | |
| 2. Monitoring: # Plans * | 3720 | 521 | 5360 | 788 | 7200 | 1111 | 19200 | 3112 | 35480 | 5532 |
| 3. Project Develop: # Projects | | | | | | | | | | |
| 4. Reintroductions: # by Species | | | | | | | | | | |
| 5. Plans to be Developed: # HMPs, ACECs, CMAs, CRMPs | | | | | | | | | | |
| 6. Coop. Agreements/ MOUs: # Needed: | 8 | 26 | 5 | 17 | | | | | 13 | 43 |
| 7. Maintenance: # projects maintained | | | | | | | | | | |
| 8. Recovery Plans: # to be Developed | | | | | | | | | | |
| 9. Acquisition and Exchange: # Projects | | | | | | | | | | |
| 10. Research | | | | | | | | | | |
| Total Cost for Objective | | 547 | | 805 | | 1111 | | 3112 | | 5575 |
| Staffing/Skills Required: (# and type of positions; workmonth cost has been incorporated in workload measure estimates) | Five additional Rangers<br>* 1 Unit=8 hours of patrol; 1WM=20 units | | | | | | | | | |

## Appendix A
## Financial Needs Summary

| PROGRAM COMPONENT | 1990-1991 $(000) | 1992-1993 $(000) | 1994-1995 $(000) | 1996-2000 $(000) | TOTAL $(000) |
|---|---|---|---|---|---|
| Coordination | 217 | 276 | 351 | 810 | 1654 |
| WildlifeHabitat Management Program | 12595 | 13978 | 15649 | 25348 | 67570 |
| Riparian Area Management | 3122 | 3766 | 3490 | 8388 | 18766 |
| Fisheries Habitat Management | 3637 | 3723 | 3852 | 16093 | 27305 |
| T&E Species Program | 20485 | 27554 | 30769 | 61873 | 140681 |
| Public Outreach | 997 | 1505 | 1811 | 4912 | 9225 |
| **TOTAL** | 41053 | 50802 | 55922 | 117424 | 265201 |

# Appendix B
# Personnel Needs Summary

| | PROGRAM COMPONENT | | | | | | |
|---|---|---|---|---|---|---|---|
| SKILL | External Coordination Management | Wildlife Habitat Management | Riparian Area Management | Fisheries Habitat Management | T&E Program | Outreach Program | TOTAL |
| Botanist | 1 | | | | 18 | | 19 |
| Biostatistician | | 1 | | | 1 | | 2 |
| Contract/ Procurement | | 1 | | | 1 | | 2 |
| Engineer/ Engineering Technician | | 2 | 1 | | | | 3 |
| Fisheries Biologist | | | | 3 | | | 3 |
| Hydrologist | | | 3 | | | | 3 |
| Lands | | 2 | | | 2 | | 4 |
| Natural Resource Specialist | | | 2 | | | | 2 |
| Public Affairs/ Visitor Services Specialist | | | | | | 4 | 4 |
| Range Conservationist | | | 2 | | | | 2 |
| Ranger | | | | | | 5 | 5 |
| Wildlife Biologist | 1 | 9 | 3 | | 6 | | 19 |
| TOTAL | 2 | 15 | 11 | 3 | 28 | 9 | 68 |

# Appendix C

# Existing Laws and Guidance

## I. FEDERAL LAWS AND GUIDANCE

The following is further detail concerning the principal laws, regulations, and policies that apply to desert tortoise management.

A. Federal Laws

1. Mineral Leasing Act of 1920, as amended (41 Stat. 437)

   a. This act states that deposits of coal, phosphate, sodium, oil, oil shale, or gas, and lands containing such deposits owned by the United States... shall be subject to deposition in the form and manner provided by this act...

   b. The Mineral Leasing Act, plus the following listed regulations and operating agreements, provide for protection of all types of surface resources on lands subject to oil and gas leasing.

   c. 43 CFR 3045. Surface Management Requirements for Geo-physical Exploration.

   d. 43 CFR 3109. Surface Management Requirements for Oil and Gas Leasing.

   e. NTL-6 Operating Procedures. Surface operating standards for oil and gas exploration and development.

   f. Lease Stipulations. Necessary to protect specific surface resources are provided prior to lease issuance by BLM.

2. Taylor Grazing Act of 1934, as amended. (43 U.S.C. 315; 48 Stat. 1269 (1970)).

   a. Requires the Secretary to protect, administer, regulate, and improve grazing districts created in accordance with the Act.

   b. Section 2 of the Act also requires the Secretary "...to ensure the objectives of such grazing districts, namely, to regulate their occupancy and use, to preserve the land and its resources from destruction or unnecessary injury, to provide for the orderly use, improvement, and development of the range."

   c. Authorizes the Secretary "to continue the study of erosion and flood control and to perform such work as may be necessary to amply protect and rehabilitate such areas within grazing district."

   d. Provides for cooperation with local stockmen associations, State land officials, and State agencies engaged in conservation or propagation of wildlife.

3. Material Sales Act of 1947, as amended (61 Stat. 681).

   a. Authorizes disposal of materals including, but not limited to, sand, gravel, stone and common clay on public lands through a sales system.

4. Public Law 167, Multiple Surface Use Act, Act of July 23, 1955 (60 Stat. 367).

   a. The act amended the 1872 Mining Law and Material Sales Act. It authorizes the Federal Government to manage and dispose of the surface vegetation resources and other resources on unpatented mining claims. Excluded from location under the mining laws are common varieties of mineral materials such as sand, stone, gravel, pumice, pumicite, cinders, etc.

   The above laws, plus subsequent regulations (3600), provide for disposal of common variety mineral materials. All deposits are subject to the NEPA process and adequate measures must be taken to protect, minimize, or correct damage to the environment. No mineral materials are to be sold if it is determined that the aggregate damage to the public lands and resources would exceed the benefits derived from the proposed sale.

5. Fish and Wildlife Coordination Act as amended (16 U.S.C. 661-667e. (1958), 82 Stat. 563).

   a. Requires action agency to consult with the FWS and the State species managing agency to develop mitigation or compliance for proposed land-use authorizations.

6. Sikes Act of 1960, as amended (16 U.S.C. 670a-f, 74 Stat 1052, P.L. 93-452, 88 Stat 1369 (1974), P.L. 95-420, and 92 Stat 921 (1978)). The basic intent of Title II was to extend the Sikes Act authority for wildlife program development from strictly military reservations to public lands administered by the U.S. Forest Service and BLM. In essence, it was a congressional mandate for BLM to: "...plan, develop, maintain and coordinate programs for the conservation and rehabilitation of wildlife, fish and game."

   a. Title I extends wildlife programs on military reservations and provides funding authorization.

   b. Title II authorizes the following key elements for BLM wildlife program management.

      (1) Cooperative agreements and close working relationships with State wildlife agencies;
      (2) Preparation and implementation of joint BLM-State wildlife agency habitat management plans (HMPs);
      (3) Integration of the BLM's wildlife program with the Bureau's planning system, environmental assessment, and public input and review process;
      (4) Implementation of on-the-ground wildlife habitat improvement, maintenance, and protection programs;
      (5) Protection and management of both Federal and State-listed threatened and endangered species; and
      (6) Establishment of a potential hunting and fishing stamp program for State wildlife agencies to use—if and when they deem fit.

   c. The mandates of Title II, Section 202(c)(3), of the amended Sikes Act apply to both Federally and State-listed fish and wildlife, i.e., all listed animals. Programs planned, developed, maintained, or coordinated by BLM under the Sikes Act for the protection and development of wildlife resources must include provisions for the conservation of federally listed animals and the critical habitats on which they depend. Conservation of such animals and habitats should be a key criterion for mutual BLM/State justification of Sikes Act programs. The law enforcement author ity of Sikes Act (Title II, Section 204) is one principal means of protecting federally listed animals and their critical habitats on BLM-administered lands.

   d. Bureau directive provides for the amendment and revision of the joint State/BLM developed plans to reflect changes in management direction, issues or potential.

7. National Environmental Policy Act of 1969 (42 U.S.C. 4321-47, 83 Stat 852, P.L. 91-190).

   a. Requires Federal agencies to utilize a systematic, interdisciplinary approach to ensure the use of natural and social sciences, and environmental design arts in any planning or decision making that might impact man's environment.

   b. Establishes national environmental policy to, among other things, encourage productive and harmonious relationships between man and his environment and to enrich the understanding of ecological systems and natural processes important to the Nation. Wildlife is obviously an important aspect of such systems and processes.

   c. Requires preparation of detailed statements on environmental impacts of proposed major Federal actions that significantly impact the quality of the human environment.

   d. Directs Federal agencies to initiate and utilize ecological information in the planning and development of resources oriented projects.

e. Identifies the responsibility to preserve the natural aspects of the environment that supports diversity and variety of habitat components.

8. Mining and Mineral Policy of 1970 (P.L. 91-631, 84 Stat. 1876).

   a. This law states that it is the continuing policy of the Federal Government in the national interest to foster and encourage private enterprise in:

      (1) The development of economically sound and stable do mestic mining, minerals, metal, and mineral reclamation industries.

      (2) The orderly and economic development of domestic mineral resources, reserves, and reclamation of metals and minerals to help assure satisfaction of industrial, security, and environmental needs.

      (3) Mining, mineral, and metallurgical research, including the use and recycling of scrap to promote the wise use of our natural and reclaimable mineral resources.

      (4) The study and development of methods for the disposal, control and reclamation of mined land, so as to lessen any adverse impact of mineral extraction and processing upon the physical environment that may result from mining or mineral activities.

9. Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq., 87 Stat. 884, P.L. 93-205, P.L. 94-359, 90 Stat. 913 (1974), P.L. 95-212, 91 Stat. 1493 (1977), P.L. 95-632, 92 Stat. 3751 (1978), P.L. 96-159 (1979), P.L. 97-304 (1982)).

   a. Supersedes the Endangered Species Preservation Act of 1966 and the Endangered Species Conservation Act of 1969.

   b. Requires all Federal departments and agencies to utilize their authorities to conserve species, subspecies, or populations of plants and animals officially listed by the Secretary of the Interior or Secretary of Commerce as threatened or endangered. All Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in further ance of the purposes of the Act.

   c. Requires Federal agencies to ensure that the continued existence of listed species is not jeopardized and that designated critical habitat of listed species is not destroyed or adversely modified. Requires consultation on agency actions to ensure that listed species are not jeopardized.

   d. Requires consultation with the U.S. Fish and Wildlife Service (FWS) or National Marine Fisheries Service (NMFS) if it is determined that any BLM action (e.g., a right-of-way grant) may affect a federally listed species or its critical habitat.

   e. Requires conference with FWS if it is determined that an action may affect a proposed threatened and endangered (T/E) species.

   f. The appropriate Secretary shall utilize the land acquisition and other authority under the Fish and Wildlife Act of 1956 to acquire by purchase, donation, or otherwise land necessary to conserve wildlife including those listed as T&E. Funds from the Land and Water Conservation Fund Act of 1965 as amended may be used to acquire lands.

   g. The Secretary is authorized to enter into a cooperative agreement with States for the conservation of T&E species.

   h. Both listed and proposed species are protected under Section 7 of the ESA. Candidate species are not protected but are species that the service is considering for inclusion on the list. According to ESA Sec. 7(a)(4), this is where the desert tortoise currently fits in: as a Category 2 candidate.

10. Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701 et seq., 90 Stat 2743, P.L. 94-579).

    a. Requires the development and maintenance of land-use plans based on an inventory of all public lands and their resources. Requires that public lands be retained unless it is determined that disposal will serve the national interest.

    b. Places fish and wildlife management on an equal footing with other traditional land uses.

    c. Requires that part of grazing fees be spent for "range betterment," including aquatic and terrestrial wildlife habitat enhancement, protection, and maintenance where livestock use occurs.

    d. Requires consideration of fish and wildlife resources before approval of land exchanges.

    e. Authorizes the Secretaries of the Interior and Agriculture to designate areas under their jurisdiction and establish time periods where no hunting and fishing would be permitted for reasons of public safety, administration, or applicable law.

    f. Authorizes the designation of Areas of Critical Environmental Concern to protect and prevent irreparable damage to fish and wildlife, and other resources.

    g. Neither enlarges nor diminishes the responsibilities and authorities of the State for management of fish and resident wildlife.

    h. Authorizes investigations, studies, and experiments—involving the improvements, management, use, and protection of the public lands and their resources.

11. Public Rangelands Improvement Act of 1978 (43 U.S.C. 1901 et seq.).

    a. Directs improvement of rangeland conditions in accordance with land-use planing under FLPMA. Public rangelands will be managed, maintained and improved so that they become as productive as feasible for all rangeland values in accordance with objectives established in FLPMA.

    b. Directs development and maintenance of an inventory of range conditions and trends as part of FLPMA's inventory process. The goal of rangeland management in accordance with the Taylor Grazing Act and FLPMA shall be to improve the range conditions of the public rangelands so that they become as productive as feasible in accordance with the rangeland management objectives established through the land-use planning process, except where the process determines that grazing uses should be discontinued.

    c. Requires prior consultation with the FWS, wildlife agencies of the State where animals are located, individuals independent of Federal and State government recommended by the National Academy of Sciences and other individuals having scientific expertise and special knowledge of wild horses and burros, wildlife man agement, and animal husbandry as related to rangeland management.

    d. Provides funding for rangeland improvements which includes providing habitat for wildlife.

## B. EXECUTIVE ORDERS

1. Executive Order 11514 of 1970 (Protection and Enhancement of Environmental Quality. This Order is in furtherance of NEPA (1969, P.L. No. 91190), whereas the Federal Government shall provide leadership in protecting and enhancing the quality of the nation's environment. Agencies will monitor, evaluate, and control on a continuing basis so as to protect and enhance the quality of the environment. Such activities shall include those

directed to controlling pollution and enhancing the environment.... Agencies shall develop programs and measures to protect and enhance environmental quality.

2. Executive Order 11644 of 1972 (Use of Off-Road Vehicles on Public Lands). The purposeof this order is to establish policies and provide for procedures that will ensure the controlof off-road vehicles on public lands to protect resources, promote safety, and minimize conflicts.

   Sec 6: The respective agency head shall, where authorized by law, prescribe appropriate penalties for violation of regulations adopted pursuant to the order and shall establish procedures for the enforcement of these regulations. To the extent permitted by law, he may enter into agreements with State or local government agencies for cooperative enforcement of laws and regulations relating to off-road vehicle use.

3. Executive Order 11989 of 1977 (Off-Road Vehicles (ORV)). This order directs heads of Federal agencies to close areas to ORV use whenever it is determined that use of ORVs is or will cause considerable adverse impact on soil, vegetation, wildlife, wildlife habitat, or certain other resources on the public lands. Agencies are also authorized to adopt the policy that portions of the public lands shall be closed to ORVs except for designated open areas and trails.

## C. BLM MANUAL SECTION 6840.06 AND 6840.3.

It is BLM policy to protect, conserve, and manage sensitive animal species and to use Bureau authority in furtherance of the purposes of the Endangered Species Act or similar State laws. BLM's responsibility to develop conservation programs for such animals, to ensure their continued existence, or to prevent the destruction or adverse modification of their habitats must be consistent not only with FLPMA, but also with the enabling State legislation.

## D.

1. 43 CFR 3800, Exploration and Mining, Wilderness Review Program

   Using the authority in Sections 302, 601, and 603 of FLPMA, the Bureau has implemented the 3802 regulations, which govern mining activities under the 1872 Mining Law. The regulations establish procedures to a) prevent impairment of the suitability of lands under wilderness review for inclusion in the wilderness system; b) prevent unnecessary or undue degradation by activities authorized by the U.S. Mining Laws; and c) provide for environmental protection of the public lands and resources.

   a. Subpart 3802

      The 3802 regulations set forth the following requirements for environmental protection (3802.32):

      (1) Air Quality. The operator shall comply with applicable Federal and State air quality standards, including the requirements of the Clean Air Act (42 U.S.C 1857 et seq.).

      (2) Water Quality. The operator shall comply with applicable Federal and State water quality standards, including regulations issued pursuant to the Federal Water Pollution Control Act (33 U.S.C. 1151 et seq.).

      (3) Solid Wastes. The operator shall comply with applicable Federal and State Standards for the disposal and treatment of solid wastes. All garbage, refuse, or waste shall either be removed from the affected lands or disposed of or treated to minimize so far as is practicable, its impacts on the environment and the surface resources. All tailings, waste rock, trash, deleterious materials or substances, and other waste produced by operations shall be deployed, arranged, disposed of, and treated to minimize adverse impact upon the environment, surface, and subsurface resources

      (4) Visual Resources. The operator shall, to the extent practicable, harmonize operations with the visual re-

sources, identified by the authorized officer, through such measures as the design, location of operating facilities, and improvements to blend with the landscape.

(5) Fisheries, Wildlife, and Plant Habitat. The operator shall take such action as may be needed to minimize or prevent adverse impact upon plants, fish and wildlife including sensitive, threatened or endangered species, and their habitat which may be affected by the operations.

(6) Cultural and Paleontological Resources. The operator shall not knowingly disturb, alter, injure, destroy, or take any scientifically important pale ontological remains or any historical, archaeological, or cultural district, site, struc ture, building, or object.

(a) The operator shall immediately bring to the attention of the authorized officer any such cultural and/or paleontological resources that might be altered or destroyed by his operation, and shall leave such discovery intact until told to proceed by the authorized officer.

(7) Access Routes. No new access routes that would cause more than temporary impact and therefore would not impair wilderness suitability shall be constructed in a wilderness study area. Temporary access routes that are constructed by the operator shall be constructed and maintained to assure ade quate drainage and to control or prevent damage to soil, water, and other resource values. Unless otherwise approved by the authorized officer, roads no longer needed for operations shall be closed to normal vehicular traffic; bridges and culverts shall be removed; cross drains, dips, or water bars shall be constructed, and the road surface shall be shaped to as near a natural contour as practicable, be stabilized and revegetated as required in the plan of operations.

(8) Reclamation. The operator shall perform reclamation of those lands disturbed or affected by the mining operation conducted by the operator under an approved plan of operations contain ing reclamation measures stipulated by the authorized officer as contemporane ously feasible with operations.

(9) 3802.4-1 Noncompliance. An operator who conducts mining operations under taken either without an approved plan of operations or without taking actions specified in a notice of noncompliance within the time specified therein may be enjoined by an appropriate court order from continuing such operations and be liable for damages for such unlawful acts.

b. Subpart 3809, Surface Management.

(1) 38091.0-6. A person has a statutory right, consistent with Departmental regulations, to go upon the open Federal lands for the purpose of mineral prospecting, explora-

tion, development, extraction, and other uses reasonably incident thereto. This statutory right carries with it the responsibility to assure that operations include adequate and responsible measures to prevent unnecessary or undue degradation of the Federal lands and to provide for reasonable reclamation.

(2) 3809.1-6. Plan Approval. The authorized officer shall within 30 days of receipt of a proposed plan of operation, notify the applicant; (5) That the plan cannot be approved until the authorized officer has complied with Section 7 of the Endangered Species Act.

(3) 3809.2-2(d). The operator shall take such action as may be needed to prevent adverse impacts to threatened or endangered species, and their habitat which may be affected by operations.

c. Subpart 8340. Off-Road Vehicles.

(1) This final rulemaking provides for the management of off-road vehicle use on public lands. Implementation of these rules will provide for continued ORV use under conditions that will protect natural resources, be less disruptive to the activities of other uses, and promote safety.

(2) The authorized officer may close trails or areas affected by ORV activities when they cause adverse effects upon soil, vegetation, wildlife, wildlife habitat, cultural resources, historical resources, threatened or endangered species, or wilderness suitability.

d. Subpart 8341.1. Lists Regulations Governing Use.

(1) Applicable State laws and regulations are applied on public lands. No person shall operate an ORV on public lands in a reckless, careless, or negligent manner; or in excess of established speed limits; or while under the in fluence of alcohol or narcotics; or cause significant damage to or disturbance of the soil, wildlife, wildlife habitat, improvements, or vegetation resources.

e. Subpart 8341.1. Contains stipulations of the conditions of use. It states that no person shall operate an ORV on public lands in a manner causing undue damage to or disturbance of the soil, wildlife, wildlife habitat, improvements, cultural, or vegetation resources. Penalties may be a fine of not more than $1,000.00 or imprisonment for not longer than 12 months or both (8340.07).

f. Subpart 8364. Closures.

(1) The purpose of this regulation is to allow for the temporary restriction or closure of public lands to protect them from the unnecessary destruction of plant and wildlife habitat.

(2) 8364.1. The regulations state in management of lands to protect the public and assure proper resource utilization, public use and travel may be temporarily restricted to prevent unnecessary destruction of plant life and wildlife habitat. Roads, trails, and lands providing access to other public lands may be closed for protection of public lands and resources.

# Appendix D

# Letters of Public Support

**MATTOLE RESTORATION COUNCIL**
BOX 160
PETROLIA, CALIFORNIA 95558

24 October 1989

Mr. William A. Kennedy
Acting Deputy State Director
Bureau of Land Management
2800 Cottage Way, Room E-2845
Sacramento CA 95825-1889

Dear Mr. Kennedy:

Your letter of 18 October responds to a long-felt need on our part to fine tune the coordination which has existed over the years between BLM and the Mattole Restoration Council (MRC), and to initiate a process for shared decision making and long range planning.

The MRC is a community based non-profit organisation devoted to the restoration of the Mattole River watershed to historic levels of health and productivity. These goals are pursued by local crews through projects in erosion control, habitat rehabilitation, reforestation, and salmonid enhancement. We also pursue research in order to obtain the base data needeed to plan and monitor our work. Since more than 12% of the Mattole watershed is occupied by BLM-managed lands (including the King Range National Conservation Area), it is natural that our goals and interests coincide in a great many instances.

In the past, the BLM and the MRC and/or its member groups have cooperated in activities such as an old growth review committee, studies of the Mattole estuary, and individual projects in salmonid enhancement and erosion control scoping, most often with the direct assistance of Mr. Jim Decker. (We hope that the presence of Mr. Decker in Sacramento is as much of a benefit for your office as it is a loss for this area.) Currently, the MRC is engaged in three research and planning activities which should have benefits for future coordinated activities.

1) A vegetative regeneration study which has as one goal the development of site- and species-specific techniques for local forest owners to play a collaborative and productive role in natural succession. Some of the test plots are adjacent to BLM lands. The results of this research may prove to be useful in future collaborative reforestation projects on BLM lands.

2) A watershed-wide survey of major point sources of sedimentation resulting in a prioritized list of rehabilitation and erosion control projects. Some of these projected sites will fall on BLM lands.

3) A new survey of hydrological processes in the Mattole estuary/lagoon is being mounted in collaboration with the Arcata Office of BLM, the CA Dept. of Fish & game, and with technical assistance from Redwood National Park and Redwood Sciences Lab. Our most immediate goals here are to augment biological studies already being conducted by BLM and HSU; and to attempt to discover remedies for some of the habiat problems identified by the latter study. This research is being funded by the State Coastal Conservancy.

Technically, potential cooperation with BLM until the year 2000 would onclude among them these three areas:

1) continued enhancement and stabilization of native salmonid populations in the Mattole, with special attention to enhancement of the summertime carrying capacity of the Mattole lagoon for salmonids and other wildlife species;

2) development of a watershed-wide erosion control plan aimed at reduction of soil erosion to "background levels";

3) continuing to examine techniques which could be called restorative forestry: producing timber and employment while ugmenting the first two goals.

Beyond these technical considerations, we need to invent a mechanism which will allow BLM to include watershed-wide processes and priorities in their land use planning, and to avail themselves of the shared goals and baseline data of the MRC and its member groups. MRC can also provide an avenue of communication to all residents of the valley through an occasional newsletter. After numerous enquiries, we are convinced that the potential for such a mechanism does not exist on the local management level. We are aware of the potential for Coordinated Resource Management Planning and have discussed this potential with both mr. Lloyd and mr Decker. We are also aware that as the number of agencies involved in decision making increases, it sometimes happens that actual on-the-ground accomplishments diminish. We are interested therefore in exploring the development of a Cooperative Agreement between MRC and BLM which allow for ongoing coordinated planning and decision making directly between the two entities.

Again, thank you for your inquiry.

Sincerely, Janet Morrison

Janet Morrison
Chairwoman

**Bighorn Institute**

*Dedicated to the conservation of the world's wild sheep through research and education*

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*Liaison to Wild Sheep Studies in Mexico*

*A Nonprofit Tax-Exempt Organization*

October 26, 1989

Mr. William A. Kennedy
Acting Deputy State Director
Lands & Renewable Resources
Bureau of Land Management
2800 Cottage Way, Room E-2845
Sacramento, CA 95825-1889

Dear Mr. Kennedy,

All of us at the Bighorn Institute greatly appreciate the support and cooperation given by the BLM through the years for our work with bighorn sheep in California. Since our inception in 1982, Institute researchers have worked in 10 western states and Mexico to investigate bighorn concerns. With the Institute's purchase of the 292 acres we had previously leased from the Bureau, we are now anxiously awaiting construction of our much needed animal care/ research facilities and administrative center to begin late November or early December. These new facilities will allow the Institute to further expand our efforts and better enable us to carry out ecological and disease studies on the world s wild sheep.

With this expansion in mind, we foresee the Institute involved in more joint efforts with wildlife agencies and where possible, assisting the BLM in looking into the causes of bighorn decline within herds experiencing such concerns in California. Therefore, we are proposing that the Institute and BLM work cooperatively on bighorn disease investigations within BLM managed areas through the year 2000, as these situations arise. Of course our main project with the peninsular bighorn in the Santa Rosa Mountains will continue, but we would also like to coordinate or assist with possible captures and sampling of other bighorn herds on BLM lands in adjacent areas. Our concerns of bighorn losses in the Santa Rosas, being primarily lamb mortality due to disease, have shown a need to obtain biological samples from other bighorn populations to determine the health status of sheep in nearby areas. Also, with the Institute s state-of-the-art animal care, surgery, and necropsy facilities to be constructed, we would like the opportunity to assist in gathering valuable disease

P.O. BOX 262 / PALM DESERT, CALIFORNIA 92261-0262 / TELEPHONE (619) 346-7334

data from sick or dead bighorn found by BLM personnel. Additionally, where we can be of assistance, the Institute would like to be involved in shared decision making with BLM on bighorn issues.

We hope to work more closely with the Bureau in the future, to help benefit bighorn sheep populations on BLM lands in California.

Sincerely,

Jim DeForge

James R. DeForge
Executive Director

October 26, 1989

William A. Kennedy
Acting Deputy State Director
Lands & Renewable Resources
Bureau of Land Management

Curt Zollner
Sacramento Quail Unlimited
1407 Shetland Court
Roseville, CA  95661

Dear Mr. Kennedy,

Since our inception in Sacramento four years ago we have worked very closely with the California Department of Fish and Game. We have installed guzzlers, cleared tracts of land, planted feed and trees, and built brush piles for escape cover in various locations in northern California. We are currently working with F and G to get a single tract of land which we can control more closely. We would do all the above items as needed, and help control access and number of hunters. This would establish a thriving upland game population in a shorter than normal time.

You asked us for suggestions on how we could cooperate with your plans for the use of BLM public lands in California until the year 2000. The answer is simple, we would like to have a tract of land, or tracts of land, which we could work out a system of improvement and management on with you. More details would have to be worked out, but we can provide a substantial amount of funds and labor to a mutual end of the improvement of upland game habitat.

I look forward to more specific communication on our cooperation.

Sincerely,

Curt Zollner

Curt Zollner
Chairman Sacramento Chapter
Quail Unlimited

Defenders
OF WILDLIFE

October 28, 1989

Mr. William A. Kennedy
Acting Deputy State Director
Lands and Renewable Resources
California State Office
U.S. Bureau of Land Management
2800 Cottage Way, Room E-2845
Sacramento, CA 95825-1889

Re: 6850 (CA-932.4)

Dear Mr. Kennedy:

Thank you very much for your recent letter requesting that Defenders submit a short description of any potential cooperative conservation projects with BLM until the year 2000.

We appreciate your soliciting our cooperation and assistance, and we wish to be kept fully informed on the progress of implementing projects described in BLM's Fish and Wildlife 2000 document.

In response to your request, we believe that there are at least three projects for Defenders and BLM cooperation in the future.

First, we are pleased with the success the past three years in achieving Congressional Interior Appropriations for BLM to acquire desert tortoise habitats from willing sellers within the Desert Tortoise Natural Area and the Chuckwalla Bench ACEC. We hope to continue working with BLM and others to support future funding for these positive acquisitions. In the last year or so, we note that BLM has changed the original schedule vis-a-vis these tortoise acquisitions. We wish to be kept fully informed, at the Sacramento address below, on any future changes.

Please inform us at your earliest convenience of BLM's requested FY 1991 Interior Appropriations requests relating to desert tortoise acquisitions, as well as any other necessary desert tortoise conservation projects. We recommend that BLM prepare a comprehensive desert tortoise funding proposal, which will incorporate acquisition, restoration, research, law enforcement, and perhaps other components. A summary of this tortoise funding request should be available to the public. Defenders and others could then support this overall funding request and help generate grassroots public support.

CALIFORNIA OFFICE: 5604 ROSEDALE WAY, SACRAMENTO, CALIFORNIA 95822 • (916) 442-6386
NATIONAL OFFICE: 1244 NINETEENTH STREET, NW • WASHINGTON, DC 20036 • (202) 659-9510

Second, we are pleased that BLM is considering land exchanges to benefit wetlands to help achieve objectives of the Central Valley Habitat Joint Venture to implement the North American Waterfowl Management Plan. We request to be kept informed on the status of any BLM projects to protect Central Valley wetlands, and we welcome any opportunities to provide assistance. We are represented on the Central Valley Habitat Joint Venture.

Third, we request that BLM consider integrating conservation biology and landscape ecology principles into its ongoing planning, resource management, and environmental review activities, For example, Defenders is promoting a 25-minute video entitled "Landscape Linkages." We have also published a booklet (copy enclosed) entitled "In Defense of Wildlife: Communities & Corridors." This booklet includes articles on the importance of preventing further habitat fragmentation and providing landscape linkages for already fragmented habitats, to ensure viable natural communities. A comprehensive bibliography of these topics is included. We would appreciate an opportunity to show the video to appropriate BLM staff (including the State Office officials) and perhaps to also distribute some of our booklets to key BLM managers.

We hope these three descriptions fulfill your request. We appreciate BLM's wildlife conservation efforts, and we continue to look forward to working cooperatively with BLM in the future.

Thanks again, and best wishes.

Sincerely,

Richard Spotts
RS

Richard Spotts
California Representative
Defenders of Wildlife

RS/js
Encl. 1

cc w/encl: Ed Hastey
Lillian Andris-Olech

cc: Interested parties

CSU S California State University, Sacramento

6000 J STREET, SACRAMENTO, CALIFORNIA 95819-2694

DEPARTMENT OF BIOLOGICAL SCIENCES

Memorandum

Oct. 30, 1989

To: William A. Kennedy
Acting Deputy State Director
Lands and Renewable Resources

From: Mike Baad, Ph.D.
Professor and Chair of Graduate Program
Department of Biological Sciences

Received your memo and request for input today, three days after your deadline so I thought I'd pass on a few comments to you immediately rather than move this through secretarial channels.

As you know, our department as well as CSUS as a whole utilizes State and Federal Lands for our teaching and research curricula and will certainly continue to do so for the forseeable future.

As sites for our extensive field trip program across the state BLM lands have served us well as examples of native habitat. Within our graduate programs, Masters degree students have and will continue to use Federal Lands as sites for their research projects and look forward to maintaining the effective liaison with federal agencies that has been established over the years.

One of my own research projects - a study of the population dynamics of four endangered plant species on Red Mountain, Mendocino County. is located on BLM land and the results of these studies are allowing BLM to develop its Recovery Plan for these species based on a long term data set reflecting changes in these populations over the past 6 years.

It is our hope that we can continue to work closely with your agency in the years to come.

Sincerely,

Mike Baad

916-278 6494

SOCIETY FOR THE CONSERVATION OF BIGHORN SHEEP
Non-Profit Organization
3113 Mesa Loa Lane
Pasadena, California 91107
818-794-7680

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November 1, 1989

United States Department
of the Interior
Bureau of Land Management
California State Office
2800 Cottage Way, Room E-2845
Sacramento, CA 95825-1889

Attn: Lillian Andris-Olech

It was good to talk to you over the phone. Enclosed is a copy of a document that we are working on with the Department of Fish and Game.

With modifications it would be nice to memorialize it by having Ed Hastey sign it as an understanding regarding the direction we are taking.

Maintenance of water sources and providing a few new ones is one of our objectives. Transplanting sheep and protecting them from adverse activities is, of course, another priority.

Thank you for your courtesy.

Sincerely,

Loren L. Lutz

LLL/ee

Enclosure

SOCIETY FOR THE CONSERVATION OF BIGHORN SHEEP
Non-Profit Organization
3113 Mesa Loa Lane
Pasadena, California 91107
818-794-7680

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# RESOLUTION

WHEREAS

The Society for the Conservation of Bighorn Sheep was created for the purpose of conservation, preservation and proper utilization of the wild sheep of North America; and

WHEREAS

The goals of the Department of Fish and Game are to maintain, improve and expand bighorn habitat where feasible, to re-establish bighorn populations on historic ranges where feasible, to increase bighorn populations so that all races become numerous enough to no longer require classification as rare or fully protected, and to provide for aesthetic, educational and recreational uses of bighorn; and

WHEREAS

The Department of Fish and Game and the Society have a memorandum of understanding to accomplish the above; and

WHEREAS

It is the policy of the State of California to maintain diversified recreational uses of wildlife, including the sport of hunting, consistent with the maintenance of healthy, viable wildlife resources, the public safety, and a quality outdoor experience as set forth by the Legislature in Section 1801 of the Fish and Game Code; and

WHEREAS

It is the policy of the Legislature to encourage the restoration and maintenance of bighorn habitat and to perpetuate bighorn herds at a viable level as designated by Assembly Concurrent Resolution No. 41 dated March 16, 1981;

NOW, THEREFORE BE IT RESOLVED

That it is the objective of the Society of the Conservation of Bighorn Sheep to have 10,000 bighorn sheep in California by the year 2000; and

BE IT FURTHER RESOLVED

That this objective will be accomplished through cooperative efforts of the Society, The Department of Fish and Game, and the land management agencies; and

BE IT FURTHER RESOLVED

That this resolution be sent to the California Fish and Game Commission, the California Department of Fish and Game, The California State Legislature, the Bureau of Land Management, the U.S. Forest Service and the U.S. Fish and Wildlife Service, and to conservation organization for concurrence and assistance in meeting the objective of 10,000 bighorn sheep in California by the year 2000.

THE
DESERT TORTOISE COUNCIL

5319 Cerritos Avenue
Long Beach, California 90805

November 7, 1989

William A. Kennedy
Bureau of Land Management
California State Office
2800 Cottage Way, Room E-2845
Sacramento, California 95825-1889

Dear Mr. Kennedy:

Please excuse our delay in responding to your recent letter requesting topics for potential cooperation between the Desert Tortoise Council and the Bureau of Land Management. I am sure you and the State Director are aware of the long standing interest and commitment the Desert Tortoise Council has expressed for the conservation of the desert tortoise and its habitat. We are pleased with your invitation to continue to work with the Bureau of Land Management in this regard.

The Desert Tortoise Council has been actively involved with the Bureau of Land Management, Department of Fish and Game and other agencies as an advocate for conservation and preservation of habitat and populations of the desert tortoise. We will continue this effort. Due to the multiple use mission of the Bureau, much of our effort has involved reviewing and commenting on environmental documents for land uses which would be detrimental to maintaining viable populations of the desert tortoise. On the other hand, we have also cooperated with the Bureau in the development of positive management plans for the desert tortoise on public lands, such as the recent plan for managing the Desert Tortoise Natural Area.

The Desert Tortoise Council will continue to cooperate with the Bureau in furthering the conservation of the desert tortoise on public lands. We anticipate our efforts will continue to focus on the review of environmental documents, management plans, etc. Hopefully such cooperation will evolve into participation on recovery teams, conflict resolution committees, etc. due to the recent listing of the desert tortoise as an endangered species.

Thank you for the opportunity to express our desires regarding cooperative relations with the Bureau. Please feel free to contact us again if we can be of further assistance.

Sincerely,

Jim

James A. St. Amant
Senior Co-chairman

# Appendix E

## Federally-listed Threatened and Endangered Species Occuring on BLM Lands in California

**Mammals:**

| | |
|---|---|
| Amargosa vole | (E) |
| Giant kangaroo rat | (E) |
| San Joaquin kit fox | (E) |
| Stephen's kangaroo rat | (E) |
| Southern sea otter | (T) |

**Birds:**

| | |
|---|---|
| American peregrine falcon | (E) |
| Bald eagle | (E) |
| California brown pelican | (E) |
| California condor* | (E) |
| Inyo brown towhee | (T) |
| Least bell's vireo | (E) |
| Yuma clapper rail | (E) |

**Reptiles:**

| | |
|---|---|
| Blunt-nosed Leopard Lizard | (E) |
| Coachella Valley Fringe-toed Lizard | (T) |
| Desert Tortoise** | (T) |

**Amphibians:**

| | |
|---|---|
| Desert slender salamander | (E) |

**Fish:**

| | |
|---|---|
| Desert pupfish | (E) |
| Lahontan cutthroat trout | (T) |
| Lost River sucker | (E) |
| Modoc sucker | (E) |
| Mohave tui chub | (E) |
| Owens River pupfish | (E) |
| Owens tui chub | (E) |
| Paiute cutthroat trout | (T) |
| Shortnose sucker | (E) |

**Invertebrates:**

| | |
|---|---|
| Kern primrose sphinx moth | (T) |

**Plants:**

| | |
|---|---|
| Amargosa niterwort | (E) |
| Ash Meadows gumplant | (T) |
| Eureka Valley primrose | (E) |
| Eureka Valley dune grass | (E) |
| McDonald's rock-cress | (E) |
| San Benito evening-primrose | (T) |
| Santa Ana River wooly star | (E) |
| Slender-horned spineflower | (E) |

* California Condors exist in captivity only.

** Emergency listed.

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